

WHAT  
DOES YOUR  
CHILD WEIGH

EDITH B. LOWRY M.D.

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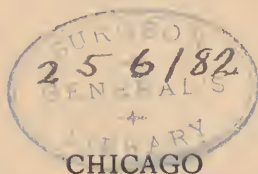
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WHAT  
DOES YOUR CHILD  
WEIGH

BY  
EDITH B. LOWRY, M.D.

Author of "Herself," "Himself," etc.



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## CHILD CREED

Every child has the inalienable right to be born free from disease, free from deformity, and with pure blood in its veins and arteries. Every child has the inalienable right to be loved, to have its individuality respected, to be trained wisely in mind, body and soul, to be protected from disease, from evil influence and evil persons ; and to have a fair chance in life.

Indiana State Board of Health.



## THE AUTHOR

The author has had an unusually wide experience in the health care of children. Her preliminary education qualified her as a teacher and she had several years' experience as a teacher in the primary grades of the public schools. She is a graduate nurse and formerly superintendent of a large city hospital caring chiefly for children. Later, as a physician, her interests led her into public health work; and during the war she was acting chief of the Bureau of Hospitals, Department of Health, Chicago. Following that, she was associated with the United States Public Health Service as a specialist in child health activities. Her work as consultant to the state authorities took her into various parts of the country giving her an opportunity to study child life in the North and South, the East and West.

She is director of Orchard Hill Camp for children, the wonderful farm camp established in that

## THE AUTHOR

beautiful and historic section of Illinois, the valley of the Fox River. Here are carried out all the ideals of child life. The children eat the proper food, sleep long hours on screened porches and spend the live long day in the open doing the things children like to do under ideal conditions of careful supervision combined with an understanding of child life. This camp has been established long enough to prove the value of right living for children. Everything that is said regarding children in the following pages has received the test of being put into actual practice.

THE PUBLISHERS.

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# WHAT DOES YOUR CHILD WEIGH

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## CHAPTER I

### WEIGHING AND MEASURING

DURING the last few years a wave of weighing and measuring of children has swept over the country. No school program seems to be complete that does not provide for the regular monthly weighing of all children, while the schools more advanced in their health program have nutrition classes as regular weekly or bi-monthly features.

We have been accustomed for many years to weighing and measuring babies at frequent and regular intervals and have become impressed with the fact that a steady gain in weight is a pretty sure index to health, while there probably is something wrong with the babe who fails to gain from week to week.

## WHAT DOES YOUR CHILD WEIGH

Now we are realizing that a steady gain in weight and height is just as important to the child of school age as it was to the same individual in babyhood.

*The New Interest in Health.*—The one outstanding benefit following the world war is the great interest and attention given to health. No doubt the lessons brought to our attention at that time will result in saving many thousands of lives to years of usefulness. When the facts concerning the revelations of the medical examinations of the prospective soldiers became known, the country was shocked to know as a positive fact that about one third of the young men of the country at the best age of physical development were so handicapped by physical defects that they were not able to take their places in the army of their country. Thinking people immediately grasped the fact that these young men also were handicapped for whatever position in civil life they might undertake, for to do one's best work he must be at par physically as well as mentally.

Following these revelations came the statement from recognized medical authorities that the largest percentage of these physical defects might have been



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prevented or corrected by a little attention in childhood.

*Women Take up the Problem.*—During the war, women were allowed to take up many public duties of great importance in their own communities and many a woman first learned the joy of work and service during these troublesome times. With the signing of the armistice, the work that had been carried on so faithfully by the women for several months became no longer necessary, but many women had become so much interested in the problems of humanity that they did not wish to return to their little homemaking and social problems alone, especially when the new suffrage amendment had just been adopted. So they took the health of children as their first big problem. They said, "We must give our children of to-day such attention that the next generation of young men and young women will not be handicapped physically as is the present one. Our greatest duty is to look to the health and welfare of our children."

In order to obtain a working basis, they began first by weighing and measuring the children and comparing these weights with a standard that had

## WHAT DOES YOUR CHILD WEIGH

been compiled by weighing and measuring thousands of children. The Federal Bureau of Education became interested and provided class room weight charts, by which it was possible to see at a glance what every child should weigh. Taking the country generally it was found that by these standards about one third of the children were noticeably underweight and the most surprising fact brought forth was that underweight was not an economic problem alone; for in many localities, the highest percentage of underweight was found to be in the well-to-do districts.

At first this was not taken into consideration, for it all seemed such a simple problem to weigh and measure children, and then provide milk for the underweight children to bring them up to weight, that child welfare rode along for several months on the popular wave; but after a time, little troubles arose, for it was found that all children did not respond to the milk cure and even the required number of calories made no noticeable impression. Also, investigation brought forth the information that there were many types of people just as there were types of animals, and one could not be judged

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by the standards of another. The race horse comes of quite different stock from the draft horse and no amount of feeding will make it worth much as a dray horse. The same fact is true of people; there are those of the race horse type and those of the heavy draft type and no amount of milk or any other food will change the former into the latter.

Now we have come to realize that these weight tables are just the averages and cannot be taken as an absolute standard up to which children can be brought by forced feeding.

However, until we have some better plan, the weighing and measuring should be carried on, for it serves to bring attention to underlying and more important problems.

Investigations have proven that many children are underweight according to whatever standard we take and these underweight children generally are undernourished and are below par in many respects, mentally as well as physically.

*The Relation of Physical Fitness to School Grades.*—After all the children in one large building in a midwestern city had been weighed and

## WHAT DOES YOUR CHILD WEIGH

measured, the principal of the school was asked if she could see any relation between the weight of the children and their standing in classes. Her reply was that, without exception, the children who were the nearest normal physically were the best in their classes.

Recently the superintendent of schools in one of our most progressive southern cities stated to his teachers that he was convinced that ninety-five per cent of the backwardness among school children was due to physical defects that might be corrected with a little care.

*Weighing and Measuring Worth While.*—The greatest value that results from the weighing and measuring of children is the fact that it serves to interest them in their own bodies and is the stepping stone to more important things, for the weighing and measuring would be useless if this were the end of the work. The big task is to find out the cause of the underweight and how to correct it.

Many underweight children have been examined and questioned in an effort to bring out the chief causes of underweight. It was found that these

## WEIGHING AND MEASURING

children, besides having numerous physical defects, had many faulty habits of living, such as late bed-time hour, insufficient or improper food and a lack of proper physical exercise or too much exercise.

The most common physical defects that were to blame for the retarded growth of the children were decayed teeth, adenoids, enlarged or diseased tonsils, defective eyesight and defective hearing. Some were found to have poorly developed lungs with a tendency to tuberculosis and so were a menace to all the other children. No mother who sends her child to school, even though the child apparently is in good health, can be certain if that child is not being daily exposed to tuberculosis or some other disease by sitting near another child so afflicted unless every child in the room has been given a physical examination. No mother can protect her own child unless she knows the condition of that child's associates.

One of the surprising things brought out in these investigations was that the undernourished children were not confined to the poorer districts. Indeed, in one city where two thousand school children were examined, it was found that the highest percentage

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of underweight was in the school whose children came from well-to-do families, the sons and daughters of local bankers, merchants, lawyers and even physicians.

Investigations carried on among these children brought out several interesting facts. The majority of the children were well supplied with spending money and very little supervision was given as to how it was spent. Many of the children were regular attendants at the moving picture shows in the evening, frequently going to the second show. As a result, they did not get into bed until about eleven o'clock. Then when it was time to arise in the morning, they had not had the needed amount of sleep and, therefore, awakened sleep-hungry and tired. In order to obtain as much sleep as possible, they remained in bed until they had just time to dress quickly and hurry off to school with little or no breakfast. Later in the morning, they became hungry and on the way home from school, stopped in a convenient store and bought cake, candy, pie or cookies, which satisfied the appetite, and accordingly the children did not care for the nourishing meal that awaited them at home. The same events

## WEIGHING AND MEASURING

occurred after school in the afternoon. The children ate sweets on the way home from school and were not hungry at mealtime. As a result, many of them went the entire day without one adequate meal.

That the children of this class, when placed on a daily schedule of regular meals, simple but well planned, supervised play, a rest period during the day and long hours of sleep at night, would improve in every way was demonstrated later at an exclusive children's camp. Every child in camp gained slowly but steadily every week, the average gain being about half a pound a week. Not only that, but their muscles hardened, their bodies became well poised and their faces radiated happiness and good health.

Of course, all this would not have been true if the children had not first been relieved of any handicap, but each child before entering camp was given a thorough physical examination and any defects found had been carefully corrected.

*Fat Child may be Undernourished.*—It often is hard for parents to realize that an overweight child may be an undernourished child, yet this frequently is the case. The overweight child may

## WHAT DOES YOUR CHILD WEIGH

have an over supply of fat and yet be lacking in good muscle structure. That this child may be a weakling is shown by the fact that such a child often succumbs to one of the so-called children's diseases, while his wiry neighbor passes through the epidemic with apparently no harm.

*The Individual Analysis.*—Taking all these facts into consideration we are compelled to realize that each child must be considered as an individual and given a health analysis or examination and then the treatment or habits of living prescribed for his individual needs.

However, in order to have a working basis for the analysis of the individual, it is a good plan to weigh and measure each child and compare the weight with that of the average child as found in the table at the end of this chapter. If the child is underweight, we must go further and find out the cause of the underweight. These underweight children usually are malnourished. This underweight or malnutrition may be due to lack of sufficient nourishing food or it may be due to insufficient sleep or to other habits of living. But it is well first to continue the examination of the child to see that he is not



## WEIGHING AND MEASURING

handicapped by a physical defect that may be corrected.

In an examination of thousands of children, it is rare to find an underweight child that is not handicapped by some physical defect. No parent would consent to his child entering a foot-race with his equals, but handicapped by a weight attached to one foot or a bandage over the face cutting off part of the air or vision. Yet these same parents allow the child to enter the educational race in school, handicapped just as surely, and these children go on in the race of life forever at a disadvantage.

The boy with defective eyesight is just as truly handicapped as though he wore a bandage shutting off part of his vision, the boy with adenoids and enlarged tonsils cannot breathe freely and hence is not having a fair chance in life's race.

Attempts to improve the nutrition of children by careful supervision of their diet and health habits often are a failure because the physical defects which handicapped the child were not taken into consideration.

*Signs of Malnutrition.*—Children suffering from malnutrition, not only are underweight accord-

## WHAT DOES YOUR CHILD WEIGH

ing to the best standards we have, but they gain much more slowly than they should. At the age of six to ten years, when a healthy child gains four or five pounds a year, they may gain only one or two pounds, or even none at all; from twelve to sixteen years, when healthy children should gain from six to ten pounds a year, they may gain only two or three pounds.

Children with malnutrition do not all behave the same way. Some are pale, dull and listless with dark rings under the eyes, tire easily and have no ambition for work or play; their work in school often is so poor that they frequently must repeat their grades. Others are nervous and fretful, hard to please and hard to manage; they eat and sleep badly. Still others are overambitious, constantly active, restless; they find it hard to concentrate.

The monthly weighing of boys and girls makes it possible to discover if a child has a tendency to malnutrition before it is far advanced, for the child who does not gain a little every month is not developing properly.

The following is quoted from an article on Mal-

## WEIGHING AND MEASURING

nutrition by Surgeon Taliaferro Clark of the United States Public Health Service—

“Unless the condition is recognized early and measures are taken to correct it, the effects of malnutrition in childhood may last to adult life. It may show itself as prolonged ill health and feeble resistance to disease; the individual may grow up undersized and underweight, not strong enough to do the average work of a man or woman. How common the condition of malnutrition is may be shown by the result of the selective draft, where nearly one man in three of the young men examined was rejected as unfit for active military service. Of those rejected, forty thousand were found unfit because of developmental defects, such as deficient height, weight, chest measurement, or muscular development.

“Careful investigations which have been made show that fully twenty per cent of the children in our schools are at present suffering from malnutrition. Is your child one of this number?

*“What to Do.*—In order to prevent malnutrition, or at least to recognize it before serious consequences have followed, the most important thing

## WHAT DOES YOUR CHILD WEIGH

is, *watch the child's weight!* In the case of older children this can best be done at school, where monthly weights of all children should be taken and recorded, and special attention to those who do not make a normal gain should be given by parents, teacher, or school nurse or doctor if there is one. It is essential that every child of school age should receive a full medical examination once a year.

"A child who is suffering from malnutrition—that is, one who is much below normal weight or one who is steadily losing weight or one who is not making a normal gain—should at once be taken to a physician and examined to see if any disease is developing. In the case of children residing in areas in which malaria or hookworm prevails, the physician should search for the presence of the parasites of these and similar diseases. The child's whole daily life should be carefully gone into to see which of the rules of health he is violating and whether this pertains to his food, his habits of eating, his hours of play, of school work, or of sleep. Malnutrition is cured by correcting the habits or removing the causes already mentioned upon which

## WEIGHING AND MEASURING

it depends. Often it is a matter of enforcing discipline in the home."

Is your child suffering from malnutrition? Is he underweight? Compare his weight with the standard which is given on the following pages.

WEIGHT TABLE FOR BOYS  
FROM BIRTH TO SIX YEARS

Height (Inches)	1 mo.	3 mos.	6 mos.	9 mos.	12 mos.	18 mos.	24 mos.	30 mos.	36 mos.	48 mos.	60 mos.	72 mos.
20	8											
21	9	10										
22	10	11										
23	11	12	13									
24	12	13	14									
25	13	14	15	16								
26		15	17	17	18							
27		16	18	18	19							
28			19	19	20	20						
29			20	21	21	21						
30			22	22	22	22	22					
31				23	23	23	23	24				
32				24	24	24	25	25				
33					26	26	26	26	26			
34						27	27	27	27			
35						29	29	29	29	29		
36							30	31	31	31		
37							32	32	32	32	32	
38								33	33	33	34	
39								35	35	35	35	
40									36	36	36	36
41										38	38	38
42										39	39	39
43										41	41	41
44											43	43
45											45	45
46												48
47												50
48												52
49												55

Up to and including 34 inches the *weights are net*. Above this the following amounts have been added for clothing (shoes, coats and sweaters are not included): 35 to 39 in.  $1\frac{1}{4}$  pounds, 40 to 44 in.  $1\frac{1}{2}$  pounds, 45 to 49 in.  $1\frac{3}{4}$  pounds.

WEIGHT TABLE FOR BOYS  
FROM SEVEN TO EIGHTEEN YEARS

Height (In.)	7 yrs.	8 yrs.	9 yrs.	10 yrs.	11 yrs.	12 yrs.	13 yrs.	14 yrs.	15 yrs.	16 yrs.	17 yrs.	18 yrs.
39	37											
40	39											
41	41											
42	43	44										
43	45	46										
44	46	47										
45	48	48	49									
46	50	50	51									
47	52	52	53	54								
48	54	55	55	56	57							
49	56	57	58	58	59							
50	58	59	60	60	61	62						
51	60	61	62	63	64	65						
52	62	63	64	65	67	68						
53		66	67	68	69	70	71					
54		69	70	71	72	73	74					
55			73	74	75	76	77	78				
56			77	78	79	80	81	82				
57				81	82	83	84	85	86			
58				84	85	86	87	88	90	91		
59				87	88	89	90	92	94	96	97	
60				91	92	93	94	97	99	101	102	
61					95	97	99	102	104	106	108	110
62					100	102	104	106	109	111	113	116
63					105	107	109	111	114	115	117	119
64						113	115	117	118	119	120	122
65							120	122	123	124	125	126
66							125	126	127	128	129	130
67							130	131	132	133	134	135
68							134	135	136	137	138	139
69							138	139	140	141	142	143
70								142	144	145	146	147
71								147	149	150	151	152
72								152	154	155	156	157
73								157	159	160	161	162
74								162	164	165	166	167
75									169	170	171	172
76									174	175	176	177

Prepared by Dr. Thomas D. Wood.

Height and weight to be taken in house clothes without shoes.

# WEIGHT TABLE FOR GIRLS FROM BIRTH TO SIX YEARS

Height (Inches)	1 mo.	3 mos.	6 mos.	9 mos.	12 mos.	18 mos.	24 mos.	30 mos.	36 mos.	48 mos.	60 mos.	72 mos.
20	8											
21	9	10										
22	10	11										
23	11	12	13									
24	12	13	14	14								
25	13	14	15	15								
26		15	16	17	17							
27		16	17	18	18							
28			19	19	19	19						
29			19	20	20	20						
30			21	21	21	21	21					
31				22	22	23	23	23				
32					23	24	24	24	25			
33						25	25	25	26			
34						26	26	26	27			
35						29	29	29	29	29		
36							30	30	30	30	31	
37							31	31	31	31	32	
38								33	33	33	33	
39								34	34	34	34	34
40									35	36	36	36
41										37	37	37
42										39	39	39
43										40	41	41
44											42	42
45												45
46												47
47												50
48												52

Weight is stated to the nearest pound; height to the nearest inch; age, the nearest month.

Up to and including 34 inches the *weights are net*. Above this the following amounts have been added for clothing (shoes and sweaters are not included):

35 to 39 in. 1 pound.

40 to 44 in. 1½ pounds.

45 to 49 in. 1¾ pounds.



WEIGHT TABLE FOR GIRLS  
FROM SEVEN TO EIGHTEEN YEARS

Height (In.)	7 yrs.	8 yrs.	9 yrs.	10 yrs.	11 yrs.	12 yrs.	13 yrs.	14 yrs.	15 yrs.	16 yrs.	17 yrs.	18 yrs.
39	36											
40	38											
41	40											
42	42	43										
43	43	44										
44	45	46										
45	47	48	49									
46	49	50	51									
47	50	51	52	53								
48	52	53	54	55	56							
49	54	55	56	57	58							
50	56	57	58	59	60	61						
51	59	60	61	62	63	64						
52	62	63	64	65	66	67						
53		66	67	68	68	69	70					
54		68	69	70	71	72	73					
55			72	73	74	75	76	77				
56			76	77	78	79	80	81				
57				81	82	83	84	85	86			
58				85	86	87	88	89	90	91		
59				89	90	91	93	94	95	96	98	
60					94	95	97	99	100	102	104	106
61					99	101	102	104	106	108	109	111
62					104	106	107	109	111	113	114	115
63					109	111	112	113	115	117	118	119
64						115	117	118	119	120	121	122
65						117	119	120	122	123	124	125
66						119	121	122	124	126	127	128
67							124	126	127	128	129	130
68							126	128	130	132	133	134
69							129	131	133	135	136	137
70								134	136	138	139	140
71								138	140	142	143	144
72									145	147	148	149

Prepared by Dr. Thomas D. Wood.

Height and weight to be taken in house clothes without shoes.  
Weigh on the same day each month. Age, the nearest birthday.

About what a girl should gain, each month. Age 5-8, 6 oz. Age 8-11, 8 oz. Age 11-14, 12 oz. Age 14-16, 8 oz. Age 16-18, 4 oz.

## CHAPTER II

### THE CAUSES OF UNDERWEIGHT

THE following outline gives the chief causes of underweight which will be taken up in detail in later chapters.

#### I. FAULTY DIET

##### I. TOO LITTLE FOOD.

###### *1. No breakfast.*

1. Late bedtime.
2. Adenoids and diseased tonsils.
3. Diseased teeth.
4. Constipation.
5. Unventilated bedroom.
6. Heavy night meal.

###### *2. Unpalatable food.*

1. Not served attractively.
2. Fried and greasy food.

###### *3. Hurried meals.*

1. Too short lunch hour.
2. Anxious to play.

## THE CAUSES OF UNDERWEIGHT

- 4. Eating between meals.*
- 5. Restricted food supply.*
2. WRONG KIND OF FOOD.
  - 1. Not enough milk.*
  - 2. Not enough vegetables.*
  - 3. Coffee or tea.*
  - 4. The candy habit.*
  - 5. Unsuitable food.*
    1. Lack of cereals and coarse bread.
  - 6. Not enough water.*
3. BAD FOOD HABITS.
  - 1. Irregular meals.*
  - 2. Hurried meals, not chewing food.*
  - 3. Eating between meals.*
  - 4. Cheerful frame of mind lacking.*

## II. FAULTY HYGIENE OR HEALTH HABITS

- I. TOO LITTLE SLEEP.
  - 1. Bed too late.*
    1. Home lessons.
    2. Moving pictures.
    3. Selling papers.
    4. Child's desire to stay up.

## WHAT DOES YOUR CHILD WEIGH

### 2. *Up too early.*

1. To work.
2. To conform to father's hours.

### 3. *Too much nervous excitement.*

1. Late play.
2. Ghost stories.
3. Indigestion due to improper food or food at late hours.

### 2. TOO LITTLE FRESH AIR.

1. *Windows closed at night.*
2. *Too many sleeping in one room.*
3. *Outdoors too little.*
  1. Home lessons.
  2. Music lessons.
  3. No place to play.
  4. Inadequate clothing.
4. *Unventilated schools or homes.*

### 3. CONSTIPATION.

1. *Improper diet.*
2. *Irregular habits.*

## III. OVER EXERCISE

### I. TOO HARD WORK.

## THE CAUSES OF UNDERWEIGHT

1. *Overwork in factories.*
2. *Overwork on farms or at home.*
3. *Extra lessons, as music.*
4. *Stairs at school.*
2. TOO HARD PLAY.
  1. *Physical training.*
  2. *Athletics.*
  3. *Games.*

## IV. DEFECTS AND DISEASES

### 1. ORDINARY.

1. *Diseased tonsils.*
2. *Adenoids.*
3. *Bad teeth.*
  1. *Improper diet.*
  2. *Lack of care.*
4. *Nerve strain, as from defective eyesight.*
5. *Tuberculosis.*
6. *Heart trouble.*
7. *Other defects and diseases.*
8. *Posture.*

### 2. OBSCURE.

1. *Syphilis.*

## WHAT DOES YOUR CHILD WEIGH

2. *Hook worm and other endemic diseases.*
3. *Disturbance of endocrine system.*
4. *Sex habits, need of circumcision.*

## V. ENVIRONMENT

1. QUARRELING AT HOME, UNHAPPINESS.
2. UNATTRACTIVE FOOD, POORLY COOKED AND SERVED.
3. UNSANITARY SURROUNDINGS, SCABIES, MOSQUITOES, ETC.

## CHAPTER III

### THE FOOD CHILDREN NEED

THE principles underlying the feeding of children are so simple that it would seem that no one could make a mistake, yet any physician who comes in contact with children in the homes will tell you that a large percentage of the illness among children is directly, or indirectly, due to improper habits of eating. Simple, clean, wholesome food of the right kind, fed to children in proper quantities and combinations, will go farther than almost any other single factor in assuring them normal health and sturdy development.

In the modern family, especially the one child family, it very often is true that the little child is the one who decides what and when he should eat. This has been proven not to be best for the child. The mother often realizes a mistake is being made yet "gives in" rather than have a "fuss."

## WHAT DOES YOUR CHILD WEIGH

It sometimes seems a wonder that certain children are able to develop at all, to say nothing of being able to grow to maturity, on the unwholesome food that is their daily diet. A few days ago a mother wrote me concerning her five year old child, who was troubled with indigestion and did not seem to gain in flesh. The secret was revealed when she said, "He eats a great deal of meat, but, as we live in the country, we are unable to have much meat except salt pork." What a diet for a five year old child!

Recently I was at dinner in a home where there was another five year old boy. This boy also was thin and continually troubled with indigestion. At dinner time, the father served the boy first and put a large piece of meat on his plate but nothing else. I inquired if he did not want potatoes and vegetables and was told he did not care for them. The little boy had a second and a third helping of meat and ate very little else except a piece of mince pie. No wonder the boy was undernourished!

A small child is no more able to digest a great deal of meat than he is able to lift heavy weights, or do a man's work in any line. It is not reasonable to



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expect that the digestive organs should be developed more fully than the remainder of the body, yet very many parents expect the child's digestive organs to take care of a man's diet, with the result that much of the food passes out of the body undigested.

Children require and can digest very little meat. They will grow much faster and sturdier if fed upon cereals, vegetables, milk and other food that is more easily digested. Meat should be allowed not more than once a day and then only a small amount and not any fat pork or salted meat.

Another child I observed recently ate only buckwheat cakes for breakfast, carried a lunch to school composed chiefly of pie and cake, then ate a hearty meat dinner at night. This child also was growing up unstable, both mentally and physically.

The children who are fed upon unsuitable food are not satisfied and continually crave candy, coffee and other stimulants. As they grow older, this longing develops into a craving for stimulating drinks and drugs. The system is not satisfied with the food consumed and there is a constant craving for something, which is misunderstood and considered a desire for a stimulant.

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It is a fact that many backward children owe this state to a lack of proper nourishment. Even in well-to-do families this may be true, for quantity and expensive food do not always mean nourishing food. Pies, cake and candy do not bring good health.

A child's appetite, to a great extent, is just what his parents make it. If he is fussy and capricious at his meals, it is the fault of his parents. When a baby is weaned, his likes and dislikes are unformed and are guided largely by suggestion on the part of the parents. Children have to be taught to like vegetables, but if a child hears continually that father does not like this or that, he naturally falls into the same habits. It is the habit of eating the wrong food and not eating the right food that is to blame for much of the malnutrition among children to-day.

Malnutrition is not starvation. Corn pone and sorghum make a meal in many southern communities, while apple pie and coffee are breakfast for the New England farmer. Many a child in the slums lives on coffee and black bread, while children

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from well-to-do families are satisfied with a luncheon of cake and pickles.

If it were the children of the slums alone that were malnourished it would not be hard to suggest a remedy, but malnourished children are found in every walk of life. *Rural school children, on the whole, show a higher percentage of malnutrition than do city children.* Indeed it has been said that the last war was won by the ribbon counter boys, for the boys from the country districts were found to have so many defects, such as bad teeth, diseased tonsils, poor eyesight which never had been corrected, that a large percentage were rejected.

Every seventh baby dies, two of the remaining six die before reaching maturity, it is estimated. These two often are the undernourished ones who fall an easy prey to the passing contagion. High price of food is a menace where the parents are very poor, but it is not the children from the poorer districts, strange as it may seem, that lead in the percentage of undernourishment.

The adult needs food for two purposes: to replace the waste tissue and to supply force for energy.

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A child needs food for three purposes: to replace waste tissue, to supply energy, and to provide material for growth. A child in proportion to its size needs three times as much food as an adult, and the child must obtain this quantity of food in proper combination and varied frequently. Food substitutes do not always hurt the adult but they do the child, so one should be extremely careful to procure pure food for the youngsters.

There are certain types of food which children should avoid, such as fried or greasy food, highly seasoned or rich food, hot breads until after twelve years of age, rich gravies and sauces. Generally speaking, except in midwinter, pork in any form is not suitable for a child. Candies and sweets between meals should be prohibited. The child needs sugar and so candy may be given in reasonable amounts directly after meals, in place of other desserts. Tea and coffee should not be included in the dietary of any growing child.

*Regularity and simplicity* should be kept in mind at all times. With small children, a regular daily schedule is as important as the schedule of the wee babe. Children like regularity and do not like

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changes in their routine if they are normal children.

In planning meals for children, the first step is to establish the regular meal hours. If possible, it is desirable for the children to have their dinner or heartiest meal at noon. This allows plenty of time for digestion. If children have their dinner at night, they either have to go to bed soon after dinner or stay up later than is desirable. Quite frequently the restless sleep, croup, or night terrors are due to a heavy meal eaten late in the afternoon.

A good schedule for the average child is breakfast at seven-thirty, dinner at twelve-thirty and supper at five-thirty. This is a schedule that can be adhered to all the year around, as the breakfast and dinner hours are convenient for the school child, as well as the younger child.

Regularity also is an essential part of the child's education. Children who are allowed to eat when, how and where they please, not only upset their physical organs, but are being educated in haphazard ways. Some mothers think they are kind to their children because when a meal is prepared, and the children beg to "play a little longer," they do not insist on all coming to the table. The meal either

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is missed entirely, or eaten cold and in scraps. The stomach soon will rebel and ill health follow.

Promiscuous eating between meals, too, is a poor education for future usefulness. If the time is too long between two regular meals, a light lunch half way between breakfast and dinner, or dinner and supper, is allowable. Nothing is to be eaten between meals except at such times. No running in half a dozen times a day to rob the cookie jar, or beg for cake or pie, as is done in many homes. No wonder that some children are always having headaches and stomach trouble. It is surprising they develop and live at all when they rush in at mealtimes, grab a few mouthfuls, then hurry off to play. In an hour or so a raid is made on the pantry and "something to eat" is procured. Another hour scarcely passes before candy is demanded and received. Thus it goes from hour to hour, from day to day, until the stomach, having had no rest, refuses to do its duty. This is a true picture of many homes where self control of the appetite is not taught. *Regular habits of life are an education for future greatness.*

*Chewing the Food:*—Of equal importance to having good food, prepared correctly and served

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at regular hours, is the necessity of chewing the food well. I have watched many school children at lunch and have seen them with a sandwich in one hand and a glass of milk in the other. The mouth is crowded full of the sandwich, then the food washed down with the milk, without being chewed except sufficiently to break it into pieces small enough to be swallowed. These children do not receive full value from the food consumed. Half the food, chewed properly, would give more nourishment to the body. Children should be taught to eat slowly and chew each mouthful "until it is lost." Of course we cannot blame the children much for this habit when we see hundreds of adults doing likewise at the quick lunch counters. Much of the indigestion and constipation of adult life is due to the habit of eating food at irregular hours without proper mastication. Very few people would be constipated if they established regular hours and chewed their food properly.

*Good Food.*—Good food prepared in a simple manner is essential for the welfare of the child. By good food is not meant rich food, nor food that is elaborately prepared, but such as gives the best

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results in building up and strengthening the body and brain. Mothers should consider it their duty to learn what is best for their children, not just seek to prepare what the child's erratic fancy demands. There are exceptional children who must have special diets for a short time to supply a deficiency of certain elements, but when such conditions arise a physician should be consulted as to the diet. The mother need not be an expert in planning foods for all possible emergencies but she can, in a short time, learn the essentials of food for children.

A child between the age of three and ten may be considered well fed if he has plenty of milk, bread and other cereals, an egg or its equivalent in flesh foods once a day, a little butter, a small portion of carefully prepared fruits and vegetables with a small amount of sweet food after he has satisfied his appetite with the more substantial foods. If any of these are omitted the diet is liable to be poorly balanced. Added to these should be plenty of water to drink.

*Water.*—Over three fourths of the body weight is water. Much of this is lost daily through the



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excretions and must be replaced. A great deal of water is taken in through the food, but not enough to replace the loss. Everyone, whether child or adult, should drink from six to eight glasses daily. Many of the nervous, dried-up appearing adults would find the Fountain of Youth in the faucet or well. In hot weather we need to drink added water in order to replace the water that passes off in perspiration.

Children should be taught to drink water freely. A glass of water before breakfast is excellent, also shortly before the other meals. Besides supplying the necessary fluid for the body, it washes out the intestinal tract and helps to prevent and overcome indigestion and constipation.

*Milk.*—Milk is essential to every child. It is the nearest to a perfect food that we can find. Every child should have from one pint to one quart each day.

Milk should not be regarded simply as a beverage, as frequently is the case. Milk is a highly nutritious food. It should be sipped slowly or "eaten." Remember it contains butter and cheese.

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Children should be taught that they are eating the butter and cheese in milk and so must take small quantities at a time.

Milk may be taken in the form of cooked food, as in gravy, soup, and puddings. It is not necessary for a child to drink an entire quart of milk each day if the milk is eaten in other forms. Some children do not seem to relish milk as a drink, but will take it as a food. One form is as good as the other as far as nourishment is concerned.

Buttermilk is excellent for children but should be supplemented with cream or butter in larger quantities as these have been removed.

In some communities it is impossible to obtain pure fresh milk. Experiments have proven that dry milk is the best substitute and this is obtainable in any locality or climate.

*Cereals.*—Children should be given cereals for breakfast and sometimes for supper. The cooked cereals are considered better than those that require no cooking, although a variety from day to day prevents the child from becoming tired of the one food. Among the cereals that are splendid are oatmeal, corn meal, rice, and cracked, cut and ground wheat.

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These are put up in many forms and under many trade names, but if the firm is reliable, one is sure of good material. It is a good plan to keep half a dozen kinds in the pantry and vary the cereal from day to day. One essential, besides good material, is proper cooking. Frequently I have heard children say, "I like this oatmeal. We don't have this kind at home." The only difference between the cereal the child liked and that served at home which the child did not like was that the former was cooked much longer. By cooking the cereal longer the flavor is brought out.

Whole milk, and not cream, should be used on the cereals for children. Very little sugar should be added. The sugar habit often is pernicious, but unfortunately, easily acquired. A taste for cereal without much sugar can be cultivated and the child then will be able to distinguish the real flavor of the cereal. A little fruit added to the cereal makes it attractive. Frequently I have found that parents have the mistaken idea that milk and fruit should not be served to children at the same meal, yet these same families do not hesitate to eat ice cream with fruit syrup served as a sundae. A little fruit jelly

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over the top of oatmeal makes a pleasant change, while sliced peaches or berries added to the cereal make an entirely new dish. Raisins added to the cereal while being cooked are appreciated, and so are other fruits, such as figs or dates.

*Fruits.*—Children need fruit in some form every day. Fruits may be eaten raw if ripe, and not over ripe. Other fruits may be served cooked. Prunes are one of the wholesome fruits that may be served at any season, while fruit juice canned in summer makes a delightful change for the child in winter.

Fruits are laxative and help to prevent constipation. They also serve to prevent scurvy and pellagra. Fruits help to clear complexions. They are necessary in the diet of every child, supplementing the vegetables.

*Vegetables.*—Green vegetables are essential in the growth of children. They make rosy cheeks and prevent many ills. They contain vitamins that help prevent pellagra and other diseases. Vitamins have been determined as something in food which makes life possible and without which we cannot live. Probably no one ever has seen a vitamin, but neither has anyone seen gravitation or electricity,

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yet the effect of these forces is measured and controlled.

People have starved to death on a perfect calory diet containing plenty of protein, starch, fat and mineral salts. Indeed, it is impossible to regulate the food for a child by adding up the calories during the day, for this alone will not prevent a one sided diet.

Five diseases are now attributed to lack of vitamins, scurvy, beriberi, rickets, pellagra and an eye disease called xerophthalmia. Pyorrhea and rheumatism may be added to the list, while some authorities are inclined to throw in baldness and premature old age.

The U. S. Farmers Bulletin No. 1207 says: "Vitamines are recently discovered constituents of certain foods. Relatively little is known about the nature of these vitamins save that they are indispensable for normal health and growth and that if they are left out of the diet for a long period, so-called 'deficiency diseases' develop. At least three kinds are now recognized which, until more satisfactory names are agreed upon, may be designated as Vitamine A (soluble in fat and sometimes called

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antirachitic, because the absence of it is believed to induce rachitis, or rickets, in children), Vitamine B (soluble in water and sometimes called antineuritic or preventive of polyneuritis and beriberi), and Vitamine C (soluble in water and sometimes called antiscorbutic, or preventive of scurvy). All three are present in milk.

“Vitamine A is of especial importance for two reasons. One is that without it children cannot grow and develop normally, even though their food is otherwise sufficient for their needs. The second reason is that Vitamine A is found in such foods as milk, egg yolk, green-leaf vegetables, fats surrounding the vital organs of animals, to a less extent in meat, and perhaps in certain fruits, and in few so abundant as in milk. It appears to go with the milk fat, and so is found in whole milk, cream and butter.

“Vitamine B is found in most foods except those which have been artificially purified, such as white flour, cornstarch, polished rice, refined sugar, and most table oils.

“Vitamine C is known to be supplied by certain fruits and vegetables and milk. Its efficiency in milk seems to be easily destroyed, and absolutely

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fresh, uncooked milk is the only milk that should be relied on to supply it."

Among the vegetables rich in vitamins that are especially valuable in the diet of children are lettuce, spinach, celery, beets, Swiss chard, kale, tomatoes, green peas and beans, mustard greens, beet greens and even the old-fashioned dandelion greens. One of these should be given to the child every day, allowing a variety from day to day.

It should be borne in mind that as a rule children have to learn to like vegetables unless they are taught to eat them when first weaned. A child never should be allowed to say, "I don't like that." Instead, he should be taught to say, "I am going to learn to like it." Suggestion is a big factor in childhood and the general tone of the conversation regarding the various foods often decides whether a child will try to eat them or not. An effective way to teach children to like vegetables is to require the child to eat just one mouthful of whatever vegetable is served. The child will eat the one mouthful to please the parent and it will not be many days before he acquires a taste for the vegetable. I never have failed to find that this method brought good results.

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Many children dislike vegetables because they have not had them cooked and served properly. Vegetables require longer cooking than usually is given them. String beans or Swiss chard cooked half an hour are not nearly as palatable as when cooked three or four times as long. Vegetables should be cooked in clear water. Many cooks have a habit of adding bacon grease or other fat to the vegetable while cooking. This is not the best way of cooking for children. The vegetables should be cooked in a small amount of water (without grease), drained, seasoned with salt and pepper, then a little good butter or bacon grease may be added at this time, just before serving.

*Meat and Eggs.*—Meat should be eaten sparingly, especially in summer. Lean meat is better than fat, while chicken and fish are better than the more hearty meats. Meat never should be fried. It may be boiled, broiled, stewed, baked or roasted. Beef and lamb are better than pork for children.

Eggs are a valuable addition to a child's diet but, like everything else, should be eaten in moderation. As a rule, a young child should not have more than one egg a day and then only in the place of meat.



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Some authorities advise an egg for breakfast each morning, but my experience has been that many children become "bilious" after eating an egg for several mornings in succession. Many a mother has said to me, "My little child has bilious attacks quite often but I have never thought of eggs as being the cause." Later observation convinced her that this was the cause. The child's diet should consist largely of vegetables, cereal and milk rather than meat and eggs. The latter never should be served fried for a child. Eggs may be soft boiled, poached or scrambled. Frying is the poorest method of cooking.

*Sugar in the Child's Dietary.*—The question constantly is asked if the child's natural fondness for sweets is not an indication of its need for candy and sugar. A certain amount of sugar in the child's dietary is certainly a very desirable way of supplying some of the child's energy. But this sugar may be best supplied in the form of milk, in sweet fruits and vegetables, in fruit-jellies, and in well seasoned simple puddings, with only occasional pieces of candy as a dessert at the close of the meal. All the sugar a child needs can be included with other foods

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at mealtime without the necessity of the too common between-meal indulgence. If a child is allowed to eat candy, cake and quantities of sweet crackers between meals, the appetite, being constantly accustomed to the stimulus of the sweet food, becomes vitiated. As a result, the mealtime becomes a farce. "Not hungry," is the complaint. Muscles, nerves, blood and bones, which need all the things that only such foods as milk, cereals, vegetables and fruit are able to supply, become badly nourished and the child is not the rosy, wholesome, sound-sleeping, rightly-developing mortal intended by Nature.

If a child is very active it is a simple matter to increase the sugar in its dietary without giving candy between meals. Sugar may be allowed with cereal or in bread and milk. Sweet jellies may be given to the younger children at some meals and preserves to the older ones. Simple desserts and cooked fruits may be well sweetened. Then the child eats the other foods along with the sugar and the diet is not a one sided affair. When we say that constant candy eating results in poor teeth we are describing a more deeply seated evil than we realize. If poor teeth are caused by too much candy, it usually is

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because the use of sugar has so satisfied the child's appetite that the child has been unwilling to include the bone-building materials in his diet.

The craving of the growing child for candy is normal, as sugar is the source of available energy for muscular work. The child needs protein for building and warmth, fat for growth, and carbohydrates for muscular energy. Candy or sugar in any form is carbohydrate. However, in giving candy and other sweets to the growing child two precautions must be kept in mind. First, the children should not be allowed to buy the adulterated candy that is sold in cheap quantities; and secondly, children should not be allowed to indulge in the desire for sweets at any and all times of the day but only as dessert after the regular meals.

The candy question always is a problem in many families. There is more harm done to the digestive apparatus of children by indulging in cheap candy than can be estimated. One little girl who came under my observation was allowed to buy candy every day. She always bought cheap candy so as to obtain a large amount. She carried this with her all day and ate it every available minute, at recess,

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at noon, and after school. Outside of school hours she seldom was seen without candy. The consequence was that she had no desire for nourishing food and her body suffered accordingly. At one time she had to spend some time in a hospital and have an operation for tuberculous glands of the neck. She was a prey to every contagious disease that entered town, and it was a wonder she did not succumb to some of them, for she had very little real strength. One or two pieces of good candy after a meal satisfies the child's desire and is beneficial rather than harmful.

*Child's Breakfast.*—Children seldom are hungry in the morning. Their breakfast, in many cases, if unsupervised, would be a little bread and coffee; and then they would go to school to exercise their quickly developing brains until the recess of about fifteen minutes or half an hour allows a lunch period. During this strain on their mental and physical powers, very few take any nourishment to sustain them.

The day should be started right with a good breakfast consisting of milk, cereal, fruit, toast and butter. If the child can run out of doors a few

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moments before breakfast, he will be more ready to eat the necessary amount.

Cereal and milk should be required and if the child knows he is expected to eat his cereal and drink his milk, he soon will form the habit and eat without being urged. It is a good plan to give the child a cup of water on rising. This has a threefold effect, it cleanses the throat, tends to promote appetite and helps to regulate the bowels.

The fruit that was planned for breakfast, such as an orange or an apple, may be taken to school and eaten at the morning recess. Fruit is practically the only food that should be allowed between meals, for if other food is given the stomach is not emptied before the next meal. The glass of milk at recess time is allowable in certain cases, but the average child is better without this glass of milk, for the tendency seems to be to depend upon the school milk and neglect to eat the breakfast at home. Of course in the poorer districts, milk at recess is the most nourishing food the child receives all day, but if it is possible for the child to have a good breakfast, this recess lunch is not necessary.

In a summer camp of children from six to ten,

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close observations were made regarding this and it was found that when the children ate the required breakfast there did not seem to be a craving for food between meals, but everyone was hungry for dinner at noon. Some of these children before coming to camp had formed the habit of eating very little breakfast, but with the regular living and example of the other children it was not long before they acquired the breakfast habit. When it is agreed that babies require four hours between meals to digest their milk diet, it seems inconsistent to put older children on a two or three hour schedule by providing milk during the morning.

Sometimes children eat no breakfast because they are too tired, having had too little sleep due to a late bedtime hour. In other cases the lack of appetite may be due to lack of fresh air in the sleeping room, to an unventilated bedroom. With many children the cause is adenoids and diseased tonsils, a decayed tooth, or constipation. These all should be looked after carefully.

An ideal breakfast for a child consists of fruit, cereal, toast and milk, with a glass of water before breakfast.

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*Dinner.*—Dinner for children should be at noon whenever possible. It should be simple but wholesome and well cooked and attractively served. A good dinner consists of a small helping of roast beef or other meat, mashed potatoes with gravy, swiss chard or other green vegetable, bread and butter, glass of milk, and cooked fruit for dessert. It is a mistake to plan elaborate desserts for children. They are better satisfied with a simple fruit dessert. Pies and pastry should not be included in the child's dietary. The "filling" of a custard or lemon cream pie served as a pudding without the rich pastry is far more digestible than it would be served in the pie crust.

*The Evening Meal.*—The evening meal for children should be simple and easily digested. It is better for the little ones to have their evening meal by themselves if the family has the dinner late. The young child often will be kept awake or suffer from night terrors or other nervous manifestations if allowed to eat a hearty dinner at night. It sometimes seems as though a special meal for the children at five thirty would mean an extra amount of work for the mother who has no help in the cooking or

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serving. However, it really serves to lighten her day. If she will plan the child's meal earlier in the day and then set out the simple supper, which as a rule requires no cooking, at five thirty, the child will be contented at quiet play while the mother is enjoying her own meal with her husband, uninterrupted by trying to wait on the children between bites.

A good supper for a child consists of milk toast and apple sauce or rice pudding with a slice of bread and jelly and glass of milk. Children who are well are contented with very simple food.

*Constipation.*—False modesty is the cause of many cases of constipation. The call of Nature should be responded to promptly.

Constipation in children usually is due to irregular habits of eating or the use of the wrong kind of foods or to the lack of a regular toilet hour. It is best treated by regulation of the diet and habits of living. There are some foods that are more laxative than others. In one family of healthy children, the dessert for the children usually consists of fruit, which helps keep the bowels in good order. Green vegetables also have a beneficial effect upon the bowels. Graham bread, sweetened with molasses



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instead of sugar, also helps to regulate the bowels. Light brown sugar used on the cereals instead of white sugar is pleasing to the child and acts as a mild laxative.

However, the most important item to be considered in overcoming or preventing constipation is to form a regular habit of going to the toilet at a definite time each day. A convenient hour should be chosen, as just before or after breakfast, then it should be made a rule to go to the toilet at this hour every day whether there is a desire or not. After a time Nature will become accustomed to this hour and respond.

Drinking plenty of water and eating graham or bran bread instead of white also are beneficial measures.

A regular daily movement of the bowels is necessary to the health of any person, child or adult. At least half the illness might be avoided if everyone took better care of the excretory system. If the waste material is allowed to remain in the bowels, not only is the water absorbed but with it are absorbed some of the poisons from this waste material. These are taken up by the blood and

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carried to all parts of the system, causing a great deal of trouble and pain. This absorption of toxins (poisons) causes headache, loss of appetite, a sense of depression and a lack of energy. Children complain of a headache or a "sick stomach" when the bowels do not move regularly.

It is very easy to form the habit of giving laxatives to children, but this habit is harmful, for it weakens the intestines and they become more and more unable to accomplish their work. If you should buy a pair of crutches and walk with their aid all the time, the muscles of your limbs soon would become weak from lack of exercise and you would be unable to walk freely without the aid of your crutches. In a way, laxatives act as crutches for the bowels and their daily use weakens the muscular structure of the intestines because of lack of use. One never should take laxatives except for an occasional dose or during illness on the advice of a physician. With care, practically every case of constipation can be overcome by right habits of living and the time to establish these habits is when the individual is a child.

*School Lunches.*—Fortunate is the child who

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for a few pennies a day is able to buy a nutritious, carefully prepared hot lunch at the school lunch room. Twice unfortunate is the child who is allowed to go to a school lunch room not properly supervised and buy whatever fancy dictates. During the last few years I have visited many school lunch rooms and have found them in all grades of efficiency. Sometimes the ones that were supervised by the people who should be most interested were the poorest of all. A great many well meant efforts prove to be detrimental rather than helpful. It always can be traced back to the fact that someone tries to do something he is not trained or prepared to do. I have visited lunch rooms supervised by parents' associations that were the poorest of their kind simply because these parents had employed some needy woman to look after the lunch room without giving any attention to the details of its management. In some cases I have found the school lunch room used as a means of making money to buy a piano or other article of furniture for the school room. One of this type was visited shortly before the noon hour and we watched the preparations for the noon serving. I talked with the two

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women (both mothers) who were preparing the food. I found they knew absolutely nothing of the effect of food upon the child or what kinds of food children should eat. The entire thought seemed to be to prepare whatever sold well to the children, whatever the child asked for. The two most popular articles were hamburg sandwiches and candy. The meat for the sandwiches was made into flat cakes, dropped into a frying pan of hot lard, browned quickly, turned and browned on the other side, then inserted into a bun from the neighboring baker's shop. As a great many of these were required in the large building and only one woman prepared them, she commenced about half an hour before time for the children to arrive, and as the sandwiches were finished they were piled into a big pan. By the time the children received them they were cold, greasy and soggy. The candy was not of the first grade, but of a kind made into fancy shapes and highly colored.

In the same city I visited another school lunch room under the direction of the department of home economics. The young woman in charge was

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trained for her work, as she was employed as a teacher of cooking. The food prepared was of the highest quality. I noticed especially the large amount of fruit, such as oranges and apples, that was being washed ready to be served. The teacher was assisted by several young girl students, each of whom apparently had received especial instructions as to her part of the work. There was some candy, but it was chiefly milk chocolate or other pure candy. I waited until the children arrived and noticed two teachers standing near the counter watching carefully what each child purchased. Nearly every child took a bottle of milk with his sandwich. No child was allowed to buy candy unless he also had a nourishing lunch, and then only in small quantities. Such a type of lunch room should be encouraged in every school building, for not only are the children receiving a nourishing meal, but they also are being quietly educated as to the foods they should eat. I talked with a number of the children in this particular lunch room and found several who were drinking milk because they wanted to gain in weight. Not only that, but they

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were drinking the milk slowly; the impression was given that the children were not in a hurry as is too often true at the school lunch period.

In many country, one-roomed schools it has become the custom to have one hot dish prepared for all the children who bring their lunch even though there is no special, nicely equipped lunch room. The hot dish varies from day to day. It may be only a simple soup or hot cocoa if the children are small and the teacher must look after the cooking each day. When there are older girls in school they can take turns preparing the lunch as part of their cooking lesson. In other cases, the lunch prepared is under the supervision of the mothers who take turns in preparing the food. The United States Department of Agriculture has done much to aid these rural schools. Farmers Bulletin No. 712 on School Lunches and Farmers Bulletin No. 717 on Food for Young Children may be obtained by writing to the Department of Agriculture at Washington. These give many practical suggestions that may be carried out by any mother or group of mothers.

*After School Lunches.*—When the children come home from school in the afternoon it is a good

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plan to have a little lunch awaiting them. In fact, if the child has eaten a cold lunch at noon, it would be better to eat more at this period and less at a later meal. An attractive little lunch also helps to solve the problem of preventing loitering on the way home from school. One mother who retained the confidence of her children throughout life, claimed that the secret of her success was the little lunches after school. Sometimes it was a bowl of hot soup and crackers, sometimes thin bread and butter with cocoa, sometimes only bread and milk. The children never knew what to expect and so retained the pleasure of anticipation. On cold days the mother always contrived to have something hot. Naturally her children always hurried home from school so as not to miss the good things. Much of the restlessness of children after school is due to an undefined longing for something. In the majority of cases it is something to eat, but that something should not be pie, cake, or candy, but fruit or an easily digested, nourishing dish.

*Child's Table Needs.*—Children require food for both repair and growth, but frequently they do not care for their meals because they are not served

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attractively. Special little dishes that appeal to the children yet do not break as easily as the finer dishes may be purchased at a reasonable price. Often the dishes and the manner of serving are as large an item to be considered as is the food itself if the child is undernourished and "finiky."

Children like individual things, as a "cake all to myself." Even the most simple corn starch or tapioca pudding which the child might not care for if served from a large dish, is eaten with glee if served as a "hill" or a "fort" made by an inverted custard cup. To "eat down to the picture" is an old way of getting children to finish the food served to them. Just a little care about the dishes and manner of serving will result in increased appetite for many a child.

Boys, as well as girls, like to cook. A loaf of graham bread made by the child under the mother's direction will be eaten with relish because it is "my" bread, while the same bread served in the usual way might not be eaten except under protest.

*Suggestions for the Overweight Child.*—As has been stated before the overweight child may be an undernourished child as he has an excess of



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fat but not well developed muscle and bone structure. Diet plays an important part in the structure of the body and many of these overweight children are the over indulged children. Many parents are cruel to their children when they intend to be kind. They are overindulgent and allow the child quantities of candy and similar diet. As a consequence these children are deprived of their right to strong bodies.

The following suggestions may prove of value for the overweight child:

Complete physical examination, as fat may be due to disease.

Regular daily exercise, but regulated as to kind and quantity.

Limit such foods as sugar, syrup, chocolate, candy, butter, cream, fats, thick soups, puddings and pastry.

Eat sparingly of cereal, bread and starchy vegetables.

Eat freely of fresh fruits and acid vegetables.

Drink plenty of water between meals, very little with meals.

Eat a little less food than is craved.

Weigh weekly and change diet accordingly.

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SUGGESTIONS FOR MEALS FOR  
CHILDREN FIVE TO TWELVE

BREAKFAST

1. Oatmeal with whole milk.  
Cooked rhubarb.  
Toast.  
Milk to drink.
2. Shredded wheat biscuit with berries.  
Bread and butter.  
Milk to drink.
3. Cracked wheat with whole milk.  
Apple sauce.  
Bread and butter.  
Milk to drink.
4. Ground wheat.  
Toast.  
Fruit jelly.  
Milk to drink.

DINNER

1. Stewed chicken and gravy.  
Mashed potatoes.  
Swiss chard.  
Ice cream.

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2. Meat loaf.

Creamed potatoes.

Cooked tomatoes

Corn starch pudding with chocolate sauce.

Milk to drink.

3. Boiled beef with gravy.

Boiled potatoes.

Creamed asparagus.

Apple sauce.

Milk to drink.

4. Escalloped salmon.

Creamed potatoes.

String beans.

Orange pudding.

Graham or whole wheat bread with butter should be served with the meal.

Milk to drink.

### SUPPER

1. Graham bread and butter.

Baked apple.

Milk to drink.

2. Vegetable soup.

Bread and butter.

Fruit jelly.

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3. Boiled rice and milk.  
    Apple sauce.  
    Hot cocoa.
4. Cream of tomato soup.  
    Graham bread.  
    Pudding.

## CHAPTER IV

### THE HOURS OF REST AND SLEEP

It has been a matter of common observation that the average person is quite ignorant of the importance of sleep in the growth and development of young children. Every adult knows that if he has been out late in the evening and consequently has not been able to obtain his accustomed hours of sleep, he is not able to carry on his work the next day with his usual efficiency. He is tired all day, and finds himself longing for the closing hour instead of taking a keen interest in his work. The same fact is true of children who do not have sufficient sleep. They may be tired every day without realizing what is the trouble, but they show the results of fatigue by lagging behind in their classes, by loitering in their games and by not manifesting a keen interest in either work or play.

Growing children need long hours of sleep.

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When awake, they usually are very active and through this activity use up all the energy developed. The time children can gain, can store up energy, is during their hours of sleep and rest.

The average school child needs at least ten hours of sleep every night in order to hold his own, while if he wishes to gain, he must add an extra hour of sleep either at night or during the day. A good routine bedtime for the average school child is eight o'clock when he arises at seven in the morning, for there always are a few minutes lost before sleep actually is in effect.

Medical authorities and others agree that all children need the following amount of sleep if they are to keep well and grow normally:—

Four years of age—twelve hours of sleep.

Five to seven years—eleven to twelve hours sleep.

Eight to eleven years—ten to eleven hours sleep.

Twelve to fourteen years—nine to ten hours sleep.

*The Stunted Child is the Tired Child.*—Children grow mainly while resting and sleeping, for then they are not using up their energy in physical or mental activities. The child who does not have

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enough sleep may be stunted in height, as well as stunted in flesh, that is, undernourished.

Sleep is one of the best of flesh producers. In many cases a child is fed properly, has plenty of outdoor exercise, does not seem to have any handicaps physically and yet remains thin and undernourished. Not unlikely, an investigation will reveal that this child is in the habit of staying up until ten or eleven o'clock every night in the week or has an irregular bedtime hour. When this is brought to the attention of the parents it is not uncommon to receive the answer, "But what can I do about it? I do not want to stay at home every evening, and if I go out any place I must take my child, for I have no one with whom to leave her." That sometimes seems a problem, but there always is a solution if the parent looks far enough. Some way must be planned so the child has a regular bedtime hour and goes to bed at that hour practically every night in the year. Otherwise, the parent is doing the child an injustice and depriving him of a chance of building up a stable and strong body and nervous system and of having a chance to compete with others on an equal basis.

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Twenty of the most undernourished children in one school were grouped into a nutrition class for the summer months. Questioning these children and their mothers revealed that not one of the twenty children had a regular bedtime hour and not one drank milk except occasionally.

*The Tired Child often is the Backward Child.*—Tired children do not learn easily, make little progress in school, and often drift to the foot of the class, while the same children, with the proper amount of sleep, might be able to be among the leaders. One has only to watch many of the young men and women of to-day to realize what an effect lack of proper hours of sleep has upon the business and mental ability of the individual. So many intelligent and well educated people never seem able to achieve success. No person can use up his energies in a "good time" every evening in the week and be worth much in business the next day.

Many a child is handicapped in school, regarded as stupid or inattentive, when the real fact is that the child is too sleep-hungry and exhausted to be able to use his mental powers.

*The Nervous and Cross Child often is the Tired*



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*Child.*—During one summer vacation, it was observed that the children of a certain group became very cross and quarrelsome the latter part of the afternoon. As an experiment, certain children were required to lie down and rest for an hour after the noonday meal. Usually this hour lengthened into another hour of quiet play, after which the children rejoined their companions. There was a noticeable difference in the children, for these rested children could play together without quarreling.

Many a mother, who has trouble with discipline, who finds her child is quarrelsome and stubborn, while she becomes irritated and scolding, would find her troubles would vanish as the mist on sunrise if both she and her child had longer hours of sleep and rest combined with the right food.

Not only is the sleep-hungry child fidgety and nervous, but permanent damage may be done to the nervous system by the continued stress and excitement.

Tiresome children often are only tired children. Bedtime is a matter of habit. The child who has been accustomed to going to bed at ten or eleven may not be able to sleep at first when put to bed at

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eight, but after a few days, his nervous system becomes more quiet and he soon drops to sleep. One reason many children find it impossible to go to sleep at an early hour is because of the excitement of the preceding hours. Father's return in the evening often is the signal for a romp and the child becomes so excited that it is several hours before he is able to calm himself again for sleep.

Children should have very little play after the supper hour. It is better that they should have only quiet games, a bedtime story, or an hour of quieting music, which prepares the nervous system for rest and sleep.

The little child is so active and so responsive to attention from adults that it frequently happens that a small child is entertained from early morning to late in the evening by adults in relays. The older children come home from school and play with the little one, then father comes and bounces him up and down while the neighbors entertain him at odd hours throughout the day, so the little one is spurred on by one stimulus after another until he is exhausted. The child of pre-school age, from two to six, is quite likely to be the pet, not only of the family, but

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of the neighborhood, and so is played with and kept under nervous excitement many hours daily.

Not only this, but his imagination is developed and kept unduly active by stories of bears and goblins, all of which are interesting and may be helpful at times, but not near the bedtime hour when their memory keeps the child awake and tends to develop a fear of the dark, a fear of being left alone, a fear of unusual sounds, or of strangers. He begs to have a light left in the room at night, or to have someone sit by his bed, all of which serves to emphasize the wakefulness and postpone the sleep hour.

It seems to be natural for parents to wish to "show off" the little one to their friends and if the child is inclined to be precocious, this is especially true. The child is stimulated more and more by the admiration of friends and exerts his nervous system to more remarkable feats with the result that the child develops nervousness, sleeplessness and other symptoms that are not natural to the normal child.

*School Work and Home Work.*—In some cases, it is necessary to limit the hours that a child spends at school before the child will show any per-

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ceptible gain. Adults doing mental work, often find that they can accomplish more by limiting their mental efforts to three or four hours a day. In certain schools children spend altogether too many hours in mental effort. As a result, they form habits of not concentrating on their tasks and of doing half-hearted work.

Extra work after school hours may be the cause of the underweight of the child. It may be music lessons or religious instruction, or sewing or study clubs that are the extra straws that break the proverbial camel's back. Many a child is able to carry on his regular school work if he has the proper amount of rest and recreation outside of school hours, but when these are taken away and he is given an added task, his body is not able to stand the strain and so the child gradually becomes undernourished. No underweight child should have any tasks or studies outside of his regular school work. Let him first gain a good physical condition, then these tasks may be added in the proportion he is able to stand them.

Many women fail in business or break down their health because they try to do the work of two people,

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that is, try to carry on their business and keep house in their hours of rest. The same is true of children. As a rule, the school tasks are all that should be required of children and the added lessons prove to be too much. If a child must study music or have other instruction then he should be excused from some of the school duties, not deprived of his hours of rest and recreation.

*A Well Planned Day.*—Work well planned is half done, is the old saying, and this is true in the care of children. A day well planned seems to move smoothly along without much supervision. Every hour of the day should be planned in a general way. This does not mean that the child is not allowed to develop any initiative, for every program should provide a time for what is commonly called free play.

The mother and home maker will find her tasks become much lighter if she will sit down at the beginning of the day and outline a program for both herself and children. Then she will not be disturbed in the midst of a necessary task to devise a play for the children or to get them out of trouble. The easiest way to keep children out of trouble and mis-

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chief is to keep them so busy at other tasks and plays that they have no time to drift into undesirable occupations.

A typical program for a child from two to six is as follows :

Rise .....	7:00
Breakfast .....	7:30
Play .....	8 to 10:30
Lunch .....	10:30
Rest and sleep .....	11 to 1:00
Dinner .....	1:30
Play .....	2 to 5:00
Supper .....	5:30
Quiet play, stories .....	6 to 7:00
Bedtime .....	7:00

This program is planned to leave the mother free at the noon hour when the older children come home from school and there is dinner to prepare and time cannot be allowed for the careful supervision of the diet of the little one.

*Importance of Establishing Regular Habits.*—  
The importance of establishing good and regular

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habits in early childhood cannot be over-estimated. The child who has been accustomed to a routine from babyhood will not get far away from the habits established as he grows older.

Regular hours for arising, for going to bed and for all the daily occupations should be established in babyhood and never broken.

Not long ago I had occasion to be in a home during the evening hours. The family had been for a drive in the country and arrived home at seven o'clock. I expected the little three year old girl would be put to bed at once, as she showed all evidences of being tired and ready for bed, but, instead, the mother went on about other occupations and the child was left to her own devices. She spied a ball and began to throw it about. The tired child always seems to be the one to get into trouble, so she soon threw the ball and hit a guest and was reproved by her mother and told that unless she sat quietly she would have to go to bed. Why so many parents hold the bedtime as a punishment idea I cannot understand. Naturally with this attitude the child does not want to go to bed. The little child mentioned stayed up until nine o'clock, becoming more

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tired and cross and was finally carried crying to bed. By that time she was too excited nervously to go to sleep quickly. How much better it would have been for all concerned if the mother had quietly taken the child to bed at a regular hour.

In establishing regular hours, one thing must be borne in mind and that is that one day's change means several days of work in reestablishing the routine. If a child is allowed to stay up later one evening, it may take several nights to reconcile him to the early bedtime again.

Some of the habits that should be established and clung to are regular hours for arising and for going to bed, regular hours for going to the toilet, regular hours for brushing the teeth, and the daily bath at night.

If possible the child should sleep out in the open; on a quiet screened porch is ideal. It has been found that children who sleep outdoors gain more rapidly than do those who sleep inside with open windows. Of equal importance is the spending much time in the open air during the day. The little child should live practically in the open air.

Overheated flats and apartments furnish condi-



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tions which may retard growth. The air is too dry as well as too warm, besides it does not circulate enough. Recent studies have shown that air in motion is much better than still air. Electric fans or other devices for keeping air in circulation should be installed in the average city apartment at all seasons of the year. Even though the steam is turned off in steam-heated apartments, there does not seem to be the proper air for children. It is better to keep a little heat turned on and have the air kept in motion by an electric fan placed near an open window. Vessels of water should be kept near the radiator in order to provide moisture. Bronchitis and trouble with the throat are almost universal among children living in the regulation steam-heated apartments.

## CHAPTER V

### A PLAY TIME A NECESSITY

HENRY VAN DYKE tells us in his charming volume, "Fisherman's Luck," that a taste of camp life is necessary in these days of haste and tumult to offset the artificial tendency of the specialized city life. We recognize this truth as applied to the elders. May it not be possible that the children feel the tension and the pressure of our modern life quite as much as their elders, although without being able so readily to determine the cause of the nervous strain?

Play is necessary in the life of any child, but to be of the most value, play should be supervised, for unregulated amusements may be productive of much harm.

According to the original meaning of the word, recreation meant anything that revived after toil, or re-created, but according to popular usage, the

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word has come to indicate amusement or diversion whether it be refreshing or more wearying.

There is something peculiar in our attitude toward life in that the same act performed under different circumstances may be a burden or a pleasure, work or amusement. A boy will labor all day, without tiring, to carry logs to build a fort, while if he were asked to carry the same logs half the distance for firewood for the kitchen, he would be exhausted within a short time. It is only by making a game of work that children are led to enjoy it. The right mental attitude is necessary.

In the general reconstruction of our ways of living that has taken place during the last generation the question of recreation has been left largely to chance. Boys and girls in cities are handicapped by lack of play facilities, while those in small towns seem to be little better off. The boys and girls growing up on the farms have plenty of recreational opportunities if they are supervised correctly. There are trees to climb, haylofts for play-houses and a wide expanse of country for races and other sports. The apartment dwellers have not these advantages, and in many cases the lack of play

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facilities is responsible for the nervous wrecks in later life. The need and desire for play is in every person's nature. It must be satisfied or the health and mental activities will suffer the consequence.

One of the wholesome signs of increasing intelligence in the school world, as well as in the home world, is the legalization of play. In many of the early Puritan households, play was a surreptitious thing sanctioned by the chief mischief-maker and children were supposed to be properly and profitably employed only when they were at work. An allied state of goodness was silence. The present day child is considered good when she "keeps her clothes clean" and sits with an angelic expression absorbing all the gossip of the elders. "Satan finds some mischief still for idle hands to do," wrote the sainted Watts, and the common proverb "children should be seen and not heard" indicated the code of child life which was strictly adhered to in primitive New England, while the same holds true in many homes of the present day.

We are just beginning to see the child's education in its true perception and to balance properly the factors of his development and are realizing that

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the vacation as well as the school time has contributed to his power, his skill, and his ability to work in coöperation with his neighbor, or has had the opposite effect. Every day leaves its imprint upon the child. Just what the result will be depends upon the environment of the child and the supervision given to his occupation. To-day's recreations are no different from those of earlier days and the life of even a city child may be just as healthful and wholesome as that of one of our pioneer ancestors.

The excursion into the pasture after berries, as many of us remember it, was not so different from the present day field lesson. We listened to Nature's voice, ate of her fruits and rejoiced alike in her beauty and her bounty. Each year, with the opening of spring, the desire for out-of-door life becomes paramount. Every Sunday and holiday sees a stream of pleasure-seekers making their way towards some park or open country. Happy the child who can roam in the country through the summer vacation with freedom from the restriction of the close quarters of the village or the city. The more simple the life, the more abundant the out-of-doors, the better for the children.

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But in this search for amusement or recreation there often is too much of a tendency to a hit-or-miss condition. Recreation needs to be systematized as much as does work. A man who performed his work in a haphazard manner, doing whatever fancy pleased him at the time, would not make much of a success of his business. It is only by careful planning and working according to a system that one is able to accomplish much. Nature has shown us that everything must be done according to tried rules, that there is a season for everything and a right and wrong way. The man living in Minnesota who would plant his tomato seeds in June could not expect to harvest a supply before frost. No matter what the work or occupation, it must be done according to some system or results will not be forthcoming. The same is true in regard to recreation. We are too much inclined to take our play according to our varying fancies, not remembering that a desire for more wholesome amusement may be cultivated.

There is a tendency in the modern day to take our recreation vicariously, by watching the other fellow. We think we are playing enthusiastically

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when we sit in the grandstand and watch the game of baseball or stand around on the frozen ground and cheer the football team. Someone is deriving benefit from the amusement, but it usually is not the onlooker. There has been too much of a tendency to develop a few great athletes instead of a great many healthy individuals.

The game of baseball as played by the schoolboy, with its emulation, its competition, its coöperation, and its obedience to rule; its debates and its clamor; its judgment in estimating distance and force, speed and course; its prompt action in the face of emergency, has its marked value in the development of the boy, but the same game, played by professionals, contributes little to the physical development of the onlookers.

This fact has been realized by educators in late years with the result that the play time of the school hours in many places contributes a great deal to the health and welfare of the child. In many of the larger schools there is employed a physical director, preferably a physician, whose duty it is to supervise the recreations of the students. When a student enters in the fall he is weighed, measured and

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examined for defects, either mental or physical. Then a system of exercise is prescribed for the individual which will develop the weak portions, just as a system of education has been planned to develop the immature mind. Not only this, but the child is not allowed to overdo so as to strain any weak part of the system. With the modern child, heart disease has become a great problem. Although the child with a damaged heart may live to old age, under the proper habits of living, yet he may be sent to an early grave by unsupervised physical exertions.

Every person, child or adult, should be given a physical examination at least once a year, then efforts directed toward overcoming any deficiencies. The competent director can so regulate the play of the school child that the child is in better health at the close of the school year than at the beginning, instead of being tired and worn out as so many students are, if their health is not supervised properly. Book knowledge without the health to make use of this knowledge, is of little value. The child who is allowed to use all his energies in the development of his mental powers is only half edu-



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cated, for the lack of physical development may result in his inability to succeed in his chosen work.

The vacation hours and the hours before and after school should be as carefully supervised as the hours spent at school. These are the hours that require more thought and wisdom on the part of the mother than do the school hours, for during the latter time, she knows her child is under the direction of trained and competent people. "It is the lessons not learned at school" that often have more influence in the life of a child than do the lessons of the school hours.

The vacation camp is becoming to be regarded as more and more a necessity instead of a luxury. Here, the opportunity is given for the boy or girl to develop as nature intended. Noise is not forbidden and the restrained muscles and nerves react from the cramping restrictions of the city life.

The building of a hut in the woods, or a boat by the river or lake, the caring for pets, the construction of bird houses or caring for a garden of vegetables or flowers contribute to the child's education just as surely as the problem in arithmetic or the careful analysis of a sentence. We are making

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provision then for something more than fun when we carefully plan the summer vacation so that it will be on all sides a good time.

The chief elements of this good time are a farm or a camp or a cottage by the water or in the mountains, out-of-doors nearly every day, except at meal-time, outdoor sleeping, plain stout clothing which can safely bear rough contact with stone walls, brambles, rough boards and gravelly beaches; something not too precious to be wet or faded, or torn; plain wholesome food well cooked and containing a goodly proportion of pure milk and fresh vegetables; boys and girls to play with, and some young-hearted adult to be guide and counselor and friend. Then "early to bed and early to rise" with a rest period during the day, thrown in for good measure. A little sprinkling of work to take off the edge of monotony and to install orderly habits of living and of health and enough direction of the play to make it fair play, and as far as possible, constructive, independent, simple:—and the summer is complete. No, not quite, for there must be the box of books for the quiet evening hour, or the hot noontime, or the rainy day; and indoor occupations, scrap books

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and paints and dolls for the girls and the work bench for the boys.

The child who is so situated as to be able to go to a well regulated camp is the fortunate child and his parents have shown their wisdom, for not only have they given the child a happy summer, but they have removed him from temptation of unsupervised amusements. With the children in a camp, the parents can enjoy a vacation trip without the worry of not knowing how the children are faring. Children seldom should be taken on the vacation trips of the parents. The constant change of scene and environment, while it has a wholesome effect upon the tired parent, tends to unbalance the less stable nervous system of the child. Children, as a rule, like routine, and the fewer changes in their daily habits, the better for their development and happiness.

If the summer in the country is out of the question, then the excursion or picnic with supervised play in between must suffice. Vacation schools are helping to solve the problem in the cities, while the Girl Scouts, Boy Scouts and similar organizations are accomplishing untold good. But

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those children who are not within reach of these or similar organizations must not be neglected. In any neighborhood, the children could be combined in a club and the families take turns in supervision of the group. The members of one woman's club give their time to these groups in the summer, each member staying with the children a day or a week at some time during the summer. If some older person would coöperate with the children in any neighborhood in their fishing expeditions or their picnics in the park, many a good time might be planned for both the city and country child.

If the camp life cannot be secured in an established camp, it is possible to establish a camp at home for the younger children. An out-of-door tent with a hammock in the backyard will furnish endless good times. Here the girls may keep house and here the boys may entertain their friends, and plan future campaigns. Several little girls spent weeks in a tent within forty yards of their home one summer and became so enamored of their life that it was with difficulty they could be persuaded to come home at night.

In another neighborhood, one woman became

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interested in the boys and formed the "Sharp Eyes" club, and went out day after day on long tramps with the boys. Sometimes they looked for birds, sometimes for mushrooms, sometimes for ferns, sometimes for watercresses; always a marvelous thing to be seen or found gave an excuse for their expedition, and always they found much more than they went out to see.

Next to the tent in the yard, the sand heap for the little ones is "a joy forever." Even in the country, this is not to be despised. If the clean sand is heaped under the living-room window in the shade and the mother can listen to the voices of the children at play while she is busy with her work, a double good is secured. The sand pile has become one of the unfailing adjuncts of the city playgrounds, and it may well extend its usefulness into the country also.

The apathy with which many mothers look upon the recreation of their children seems very strange. It is common to hear a mother say "Oh, run along and play, I am busy now." Other mothers seem quite contented if their children are playing with others of the proper social position. What these

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children are playing and what they are learning in their play seems to be considered a matter of no importance. "Oh, I know my daughter is playing with nice girls," is the unconcerned remark of many a mother. That these so-called nice girls often are led astray or into harmful practices is not considered.

I would venture to say that nine-tenths of the mothers in the world know very little concerning the real life of their children, because they do not know what occurs during play hours. The way mere children are allowed to go to public places of amusement unchaperoned is appalling.

With the beginning of spring, this unsupervised amusement seems to be more and more common. Boys and girls swarm the public parks, the amusement parks and the excursion boats. If it were possible for the mothers to hover unseen "smiling through" over one of these unchaperoned excursions on which the children are allowed to go, I am certain their smile would be changed to concern and there would be a world-wide reform in the amusements or recreations of the day. The pendulum has swung from the days of forbidden amusements of our ancestors to the license of the present day, but the good

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common-sense inherited from these same practical Puritans cannot help but come to the surface eventually and parents are beginning to take more interest in these "lessons not learned at school," to realize that they should be as carefully planned as any of the lessons of schooltime hours.

Recreation and amusement are much abused terms. It is not much recreation for a girl who has been in a close office or schoolroom all day to spend the evening in a poorly ventilated moving picture theatre, where, besides the effect of bad air breathed and re-breathed, she is subject to constant strain on the eyes. Boys and girls in school need to seek the amusements in the wide open spaces, where the muscles and nerves cramped by the confinement of the schoolroom can react and develop. The game of tag or ball will even improve the handwriting in school, for it steadies the nerves.

Mothers of growing boys and girls should know where their children are at all times. They should not take too much for granted. In a local paper recently, there was an article concerning the boys and girls of that town. Several girls were supposed by their mothers to be spending their evenings with

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various playmates, while in reality, these girls were spending their evenings in a neighboring town in company with men many years older than themselves and not too scrupulous as to the treatment accorded the daughters of their neighbors. Another instance that came to my notice lately was that of a young girl who had permission to spend the night with an intimate girl friend. Of course, her mother knew where she was, but she did not know that the parents of the friend were out of town, and that these two fourteen year old girls entertained two older boys until the wee morning hours.

With the younger girls and boys, it is just as necessary to know where they are and what they are doing at all hours. They may be learning habits that are injurious to their health. Just recently, there was brought to my attention the instance of a boy about twelve, who was found teaching self-abuse to a neighbor's boy of four.

But not only are these unsupervised hours liable to be harmful, but an opportunity is being lost for improvement of the health of the child. The play should be so regulated that the child is developing at all times. Children should return to school in



## A PLAY TIME A NECESSITY

September after a summer vacation brown and sturdy, in far better condition to meet the confinement of the schoolroom and the reiteration of the daily tasks. The beginning of the summer is an excellent time to free the child of its handicaps, as explained in the following chapter. Adenoids should be removed and all other defects noted so that they may be corrected.

If a boy is round shouldered and narrow chested, there are many sports in which he can be encouraged that will correct this condition. The very young boy can be encouraged to play "steam engine." If he imagines that he is an engine, all the movements will be such as will tend to develop the chest and lungs. The older boy or girl may be encouraged to swim and row if there is an available body of water. Swinging Indian clubs or hanging from a horizontal bar have a tendency to correct the same trouble, while the horizontal bar is also excellent for the boy who has a tendency to curvature of the spine.

The little boy who is bow-legged should be provided with a velocipede large enough so that he has to stretch a little in order to reach the pedals. In this way, the weight of the body is removed

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from the legs while at the same time they are being strengthened by exercise.

The child who is nearsighted or subject to headaches should be encouraged to play in the open, to do anything which will require her to look at large objects in the distance. She should not be allowed to sit and sew. Even the making of a doll's clothes should not be encouraged.

Baseball and tennis are excellent aids to the acquiring of good health, for they require the free play of so many muscles. Skating not only develops several sets of muscles, but it gives the child confidence in himself and helps to drive away fear. Rolling the hoop is an excellent exercise for either girls or boys. Indeed, so numerous are the beneficial plays of childhood that we might adapt to them the old adage and say, "For every evil of childhood, there is a play or there is none. If there is one, try to find it. If there is none, devise it."

For a mother must be ingenious if she would meet all the problems of childhood in the right spirit and make play of lessons. She must be ever alert, watching and planning. Such a mother can accomplish wonders during the summer.

## CHAPTER VI

### FREEING THE CHILD OF ITS HANDICAP

ALTHOUGH it is common to consider a child well if he is not too sick to go to school or join in the play with his friends, yet we are beginning to realize that this is not true, that health is not simply absence of disease. The newer idea of health is that the body always should be in good repair, that the child should be free from the handicap of physical defects that may cause serious trouble later.

A man does not wait until his automobile breaks down before he gives it attention. At regular intervals he has it looked over to see that there are no loose bolts, plugged oil cups or other minor defects that might result in serious trouble later. He applies the old adage "A stitch in time saves nine," and so prevents trouble at inopportune times. The same need for regular attention is true of the body

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machine. Much illness might be prevented by going over the various parts at regular intervals and correcting any defects found, no matter how slight they may be. A loose screw has been known to cause a serious accident. A defective tooth may utterly incapacitate a judge.

In order to visualize health to the children in school and to the parents and teachers, several states have adopted a health record devised by a representative of the United States Public Health Service, which shows at a glance the physical condition of the children. This health record sets a standard for each part of the body to which an effort should be made to bring the child. The requirement outlined is as follows:—

- |       |   |
|-------|---|
| EYES— | (a) Vision normal or corrected by glasses.  |
|       | (b) No evidence of disease or inflammation. |
| EARS— | (a) Hearing normal.                         |
|       | (b) No evidence of disease or inflammation. |
| NOSE— | (a) No adenoids.                            |

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- (b) No other obstruction.
- THROAT— (a) No diseased or enlarged tonsils.
- (b) No evidence of disease or inflammation.
- MOUTH— (a) No unfilled cavities in the teeth.
- (b) Teeth clean, showing evidence of daily care.
- (c) Gums healthy.
- SKIN— (a) No eruption.
- (b) Scalp clean, and free from scales.
- (c) Scalp free from pediculosis.
- CHEST— (a) No evidence of disease or inflammation of the lungs.
- (b) Chest expansion of at least two inches.
- VACCINATION— (a) Good scar or certificate of recent vaccination for small pox.
- NUTRITION— (a) Weight normal or not more than ten per cent over or under.

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- (b) Negative hook worm report  
(for southern states).
- (c) No enlarged spleen (Malaria).

No claim is made that this is an ideal health standard, but it is claimed to be a standard that should and can be lived up to by every person whether child or adult. The requirement purposely was set sufficiently low so it would be possible for it to be reached by practically every child in school who made the effort. For this reason, no mention was made of cardiac (heart) lesions, for instance, as such a condition probably could not be corrected by the child. The child should not be discouraged by an impossible standard. It is far better to raise the standard gradually from year to year just as we raise the standard of the child's school work as the child passes on from grade to grade. The standard required in arithmetic from a child in the third grade might seem very low to an adult, but it is fitted to the child's development and will be raised as soon as the child passes this requirement and goes on to the next grade. So it is with the health standard for school purposes, it is better to make

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the requirement low at first until the majority of children reach this standard and then raise the requirement gradually. The parent who is interested in the individual child should require every portion of the body to be in good working order.

The outline was arranged to take in the more obvious defects and does not include many defects that would be noted on a more rigid examination, the object being to interest the child in his own health and to secure his coöperation in having these more common defects corrected. As the health condition of the school improves from year to year, the requirement can be raised accordingly. How common the defects mentioned in the outline are in the average school is shown by the fact that it is rare to find more than one child in a room (with the exception of a few cities) that meets all the requirements. The greatest percentage of failure is under the requirement for mouth, while the failures under throat are very numerous. Of three thousand children in ninety-four grade rooms examined recently, only eighty children came up to this standard on the first examination. Yet these children lived in one of our conservative cities where the population had

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been largely American for several generations.

This condition of defective bodies of our children is true all over the country, due largely to the fact that we have had no adequate health instruction in the schools.



## CHAPTER VII

### BUILDING HEALTH WITH THE HEALTH SCORE CHART

IN order to visualize health to the pupils and teachers, I devised a Health Score Chart, which tells at a glance the physical condition of every child in the room.

On the Health Score Chart a red star indicates that the child was, on the original examination, up to the standard in the subject indicated at the head of the column. For instance, a red star in the column marked "EYES" indicates that at the time of the first examination, the child's vision was normal or corrected by glasses, also that there was no evidence of disease or inflammation.

Blue stars indicate corrections. For example, if the child had poor vision and later had this corrected by glasses, and there was no evidence of disease or inflammation, he would be entitled to a blue star

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U. S. PUBLIC HEALTH SERVICE. HEALTH SCORE OF THE CHILDREN IN ... GRADE, ..... SCHOOL.

[illegible]

Class score at end of session, —.

Class score at beginning of session. —:

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under "EYES." The two colors simply show graphically whether any corrections are being obtained.

Gold stars are placed before the names of children who have met all health requirements, that is, when every space following the child's name is filled with either a red or blue star.

What the Health Score Chart means in the school-room is this: The principal of the school may be visiting the room and hear a little child read very poorly. Looking at the Health Chart, he probably finds that the child has no star in the column headed "EYES." The thought comes immediately, "Why, that child has something wrong with his eyes." At once, health is a vital subject to him, and is seen to have a definite effect upon the school work.

These charts were designed, first, to meet the request of teachers for a record to be left in the school, and, second to impress upon the children the idea of health. In other words, "it is a record in the language to which children are accustomed." Charts and Stars are used in practically every school all over the country. By the use of these charts, the child himself is stimulated to do the "follow up

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work" in the home. It is felt that in his desire to "follow the crowd" and have a gold star placed before his name, his importunities will be more successful in securing attention of the parents than any other method. Wherever these charts have been in use, all concerned have been well pleased with the results.

It should be the earnest desire of every parent to place his child in such a physical condition, to remove all handicaps, that the child is free to gain and develop in a normal manner. In the following pages, I shall take up the subject at the head of each column on the health chart so that the parent may have a clear understanding of what is necessary in order that the child may not be handicapped.

EYES— (a) Vision normal or corrected by glasses.  
(b) No evidence of disease or inflammation.

Every child should have the eyesight tested, and in many cases surprising things are revealed. In one city where we were organizing health work in the schools I tested the vision of the first child in

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school. The child happened to be a very attractive little girl about seven years of age. Neither the teacher nor the parents had noted anything wrong with the child's vision, but very much to the surprise of everyone, we found that she could see absolutely nothing with one eye.

Only recently, my attention was called to a little girl in the second grade with eyesight so defective she could not distinguish one word from another. Being unusually bright, she had memorized her reading lessons in the first grade and so had been able to go on with her class.

In every schoolroom there will be found two or more children with defective vision and unless the eyesight of each child has been tested carefully, no one can be sure which child is handicapped. In one room, there was one boy of about ten who was very untidy personally and backward in his classes, apparently not taking an interest in anything. His eyesight was found to be quite defective, and after he had been provided with properly fitted glasses, he became a different boy. For the first time in his life he could see clearly. From an untidy careless boy, he became one of the neatest in school, for now he

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could see whether there were spots on his clothing and whether his hair was combed.

In one small country school we found three children who were cross-eyed. An examination revealed that the two older children had lost the sight of one eye entirely, for Nature had tried to relieve the nervous strain by taking away the vision from one eye.

These children with defective eyesight, if not corrected, probably will be the boys and girls who will leave school early to take up work that does not require eye strain. A boy who finds he has severe headaches every time he studies soon will plan to neglect his lessons and naturally falls behind in his classes and loses interest. In one instance, a pupil seemed unable to learn to read and it was only after a thorough test of the eyes that it was found that whenever he looked at a printed page he saw double, and the two visions blurred into an indistinct mass if he looked more than a few seconds at a time. With properly fitted glasses, this child became as bright as any in the room.

Testing the eyesight of children is such a simple matter that it seems unforgivable that this should be

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so widely neglected. But the testing of the eyesight is not all that is necessary to protect the vision. There are a number of diseases of the eye which may be passed from one child to another. One of the most serious of these diseases is trachoma, sometimes called granulated lids. Unless properly treated, this disease may cause total blindness. In some of the southern mountain regions, it is extremely prevalent, while it may be found in any part of the country, having been brought into a school by some child from another neighborhood. In one school room, nearly half the children were found to have contracted the disease, which was brought to school by a little girl living in a slum neighborhood on the outskirts of town. This tends to show that parents cannot know the condition of their own children unless the entire room of children has been examined. In this room, many of the children examined had the disease in such a mild form that it would have passed unnoticed, except that more severe cases were found in the same room. These mild cases were put on treatment immediately, while if they had not been discovered they would have grown worse gradually.

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In pioneer days, the father had to take precautions to protect his children from the wild animals so abundant at that time in the neighboring woods. With the advance of civilization, we have been lulled to a false sense of security; for there are other dangers whose power to destroy are just as great, but they are overlooked because of their apparent small size. A man would not willingly send his child into a home where there was a ferocious dog, but he would unthinkingly allow his child to go into homes without first investigating whether these homes are safe for his child from a moral and sanitary standpoint. Many a child has been exposed to and contracted a serious disease because his parents were not careful enough to find out with whom their children were associating in school and on the playground. Parents should insist that every child in the school room attended by their child should have the eyes examined in order to eliminate this danger of their child losing its precious eyesight.

It also should be borne in mind that in some cases the child's eyesight has been defective from birth and this may be the reason he is slow to grasp new ideas which must be seen to be appreciated. A child who



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appears backward may be a partially blind child whose defect has not been recognized.

EARS— (a) Hearing normal.

(b) No evidence of disease or inflammation.

In every schoolroom there are at least one or two children who are handicapped by defective hearing. Often a child who seems to be heedless or dull really is a partially deaf child.

One-third of all adults are more or less deaf! Such is the amazing statement that appeared recently in one medical journal. That this deafness frequently is avoidable, being due to neglect, is the more appalling fact. That this neglect often dates from childhood is the concern of those who have the welfare of children at heart.

A great deal of deafness of childhood is due to the nose and throat growths, adenoids and enlarged tonsils which will be explained later. Another prominent cause of deafness is an inflammation of the ear resulting from a simple cold or following some of the infectious or contagious diseases, as

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measles or scarlet fever. Ear ache is very common in childhood and may, or may not, be a symptom of a serious disorder. Nine ear aches out of ten are due to an accompanying coryza (cold in the head). The pain frequently comes on suddenly. Perhaps the child awakens in the night crying loudly. A child of a year or more will put his hand to his ear and so indicate the seat of the pain, but a small baby will simply continue to cry loudly. The only way to locate the pain in this case is by the elimination of other disorders. If unrelieved, an ear ache may continue for several hours or even days. For a simple ear ache due to cold, the best remedy is heat in some form. Often the application of a hot water bag over the ear will be all that is necessary. If the ear ache does not yield to the most simple of remedies, it is best to consult a physician.

Any discharge from the ear calls for prompt and intelligent treatment. It is best to consult a physician as early as possible. Sometimes pus forms behind the drum, which may rupture to allow the escape of the accumulation. In this instance, cleanliness is absolutely necessary in the treatment. The ear should be cleansed thoroughly every day, using

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an ear syringe or a fountain syringe filled with water as hot as can be borne. The bag should be hung not more than a foot above the patient's head. A very small point to the syringe should be used and the water allowed to run in and out of the ear slowly. By pinching the tube of the syringe, it is possible to regulate the flow of the water. There should be very little force to the stream of water, otherwise the process will be painful. Use plain hot water or a boric acid solution unless otherwise ordered by the physician. It always is best to have the treatment given under the supervision of a physician but a mother in a remote district may benefit the ear greatly by this daily irrigation. After the ear has been cleansed thoroughly a little absorbent cotton may be packed lightly in the outer ear to keep out the dust.

In older children complaining of pain in the ear, an examination should be made for foreign bodies. Children sometimes thoughtlessly put various things into the ear, such as beans and other small objects. In the excitement of playing, the instance may be forgotten until a few days later when the child complains of pain in the ear due to inflammation set up

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by the presence of the foreign body. These small objects usually can be removed by the use of a small pair of forceps such as any physician has in his office. Insects which have flown into the ear can be floated out on oil or water. It is best not to use water unless one is certain there is no other object in the ear that might swell and so become enlarged. Corn, peas or beans sometimes are difficult to remove because of their swollen condition.

Quite frequently, children as well as adults complain of a roaring or rumbling sound in their ears. In many instances, this is due to some hardened wax which has become loosened from the drum, and so affords a small air space between it and the drum. Every slight movement of this wax, by compressing the air, causes a roaring sound in the ear. Sound is produced by vibrations of the drum and the very slight movements of the wax often produce a sound as loud as the roaring of the ocean.

A great many cases of partial deafness are due to impacted wax. This does not necessarily mean that the person is not cleanly, for the wax becomes impacted on the drum out of reach of the ordinary wash cloth. An inflammation of the ear,

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no matter how slight, may cause the wax to accumulate on the drum. This interferes with the vibrations produced by the sound waves and so causes partial deafness. The natural remedy for this form of deafness is to remove the layer of wax. In many instances this is not as simple a process as it may seem, for the wax may be adhered closely and no force is allowable because of the danger of injuring the drum. It first is necessary to soften the wax by putting a few drops of glycerine or mineral oil into the ear, inserting a loose plug of cotton and allowing this to remain for several hours until the wax is softened. In some cases, the wax may be washed out with warm water after it has become softened, in others it may be necessary to use an applicator made by wrapping a piece of absorbent cotton around a tooth pick, while in others only an ear forceps in the hands of a physician will be able to accomplish results.

Not long ago, I examined a young man who was so deaf he could not hear ordinary conversation. Examination revealed an accumulation of wax in both ears. After this had been removed, he was able to hear as well as anyone.

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Whatever the cause of any deafness in childhood it should not be neglected, for the tendency is to become worse unless proper treatment is instituted. Every child should have the hearing tested, also the ears examined to see that there is no evidence of discharge or inflammation. Otherwise the child not only may be handicapped in school, but may be totally deaf in later years due to neglect.

The deaf child often becomes the backward and unresponsive child. Many a child is considered dull and stupid when the real fact of the case is that he is unable to hear more than half that is being said in the room. He loses his place in the reading class when the reader happens to be behind him. These children do not hear many of the explanations of the teacher and so frequently ask a question that has been explained only a few moments previously, and, therefore, are considered inattentive. They fail to hear the directions given by the teacher and so are accused of disobedience. As they fail to do much of the work required of them, they gradually drop behind their classmates unless by some happy circumstance, the defect is discovered and the child

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is given a front seat in the class-room or his hearing is restored by proper treatment.

Nose—(a) No adenoids

(b) No other obstruction.

It almost seems unnecessary to urge parents to see that the children are free from adenoids as there has been so much said about these of late years, yet we never examine a roomful of children but we find several with very large adenoids. A trained worker can glance over a group of children and pick out a number so afflicted, for they invariably will be mouth breathers and often have a stupid expression on their faces.

We have heard so much of adenoids of late years that, like appendicitis, we are inclined to regard the trouble as a product of modern life and wonder if it is not a fad of the age. The real fact, though, is that these disorders were about as common years ago, but the exact conditions were not recognized. People of previous generations died of inflammation of the bowels. In fact, whenever this disorder ap-

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peared, there was considered to be little hope for the patient. Now when people have the same symptoms, we call the condition appendicitis and take out the disturbing appendix and save the life of the patient.

So it is with adenoids. Mothers formerly spent hours comparing notes about their children's difficulties brought about by "catarrh." They bought gallons of patent medicine and spent considerable money visiting various doctors with very little benefit. This, too, is changed now. We know something about this disorder, which we formerly placed under the general classification of catarrh. Now we look for tiny growths which partially plug up the air passages.

Children who have colds all the time, who are prone to sore throat and who breathe with their mouths open now have their trouble corrected by very simple means.

Adenoids are a growth in the air passages from the nose to the throat through which the air we breathe must pass. In appearance, they resemble bunches of gristly grapes. When these growths are



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present, they partially occlude the air passages, the child is unable to get sufficient air by breathing through the nose, so is compelled to breathe through the mouth. This is noticeable, especially at night when the child is not trying consciously to breathe through the nose.

Even by breathing through the mouth the child often does not receive sufficient air, and so becomes pale and tired. Oxygen from the air is necessary to make the red coloring material of the blood and if this is not obtained the child becomes pale, just as plants droop and turn yellow if they do not receive enough air, light and moisture. This pale, tired child has not sufficient vitality to withstand disease and so becomes the easy prey of colds, sore throat, pneumonia and all the diseases of the air passages especially. Also, it more readily succumbs to other diseases.

Another result of adenoids is the resulting deformity of the face and mouth. In the effort to obtain air through the nose, the muscles and bones of the face try to adapt themselves so as to enlarge the air passages. As a result, the arch of the mouth

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is not normal. This causes the teeth to protrude and become arched. The child has what is called a typical adenoid expression.

With the removal of the adenoids, it seems as though magic had been performed. Within a few months a marked change is noted in the entire system of the child. The color comes back into the cheeks, the face loses its listless appearance, the child becomes energetic and takes an interest in games, the school work is accomplished with more ease; and from a position at the foot of the class, the child may make rapid progress toward the head. Lack of fresh air dulls the mental powers of any person, and when a child never receives sufficient oxygen it should be expected that he would seem dull. Unfortunately, the cause of this condition is not understood and the child is scolded for his lack of attention. Naturally, he becomes morose and sullen, even revengeful. So in some cases, the simple removal of adenoids changes the entire character of a child.

Among the other mental faculties, the hearing quite often is seriously affected by the presence of adenoids. The removal of the cause usually will

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restore the hearing unless the condition has existed too long.

- THROAT— (a) No diseased or enlarged tonsils.  
(b) No evidence of disease or inflammation.

Thirty per cent of all children have enlarged tonsils or adenoids, usually both. Just why this is true is a question. The tonsils may be considered the scavengers for the mouth. Part of their work is to catch any disease germs that come into the mouth and destroy them before they enter other portions of the body. The baby playing on the floor carries many, many germs into his mouth, for the moist hand readily picks them up and baby is inclined to put the hand into the mouth again before many minutes. No doubt the tonsils catch and destroy millions of germs every year of baby's life. Yet, it seems that after a time, the tonsils become so overworked that they lose their power to destroy and are themselves destroyed. They become enlarged and infected with disease germs.

Nature intended that the tonsils should gradually

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atrophy or shrink as the child becomes an adult, so that the normal adult has very small tonsils; but when the tonsils become diseased, they do not atrophy but tend to grow larger. These disease laden tonsils then are a menace to the body they were intended to protect. They harbor germs that will in later life produce rheumatism and heart disease. In order to protect the body, they must be removed if they are diseased. Heart disease is becoming more and more common and much of it can be prevented by removing infected tonsils.

The children with enlarged tonsils and adenoids are handicapped in their progress. Besides, these children are more liable to be afflicted with tonsilitis and other diseases. As a result, they lose from one to six weeks schooling every year and this frequently throws them far behind in their studies and they cannot be promoted with their grade but have to take the same work over and over again. A few such occurrences and a boy of fourteen is only in the fourth or fifth grade and rejoices if he can stop school and go to work.

It often is a question whether to remove tonsils that are only slightly enlarged, and the child does

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not have tonsilitis. Many things should be taken into consideration before deciding. The child may never have tonsilitis and yet the tonsils may be a constant source of poison to the body, shown by nervousness, irritability, inability to concentrate, or, the only symptom may be malnutrition which fails to respond to all other measures. After examining several thousand school children, I am convinced that the average chronically enlarged tonsils should be removed, especially if the child is underweight or inclined to be nervous.

- MOUTH— (a) No unfilled cavities in the teeth.  
(b) Teeth clean, showing evidence of daily care.  
(c) Gums healthy.

Nice, even, white teeth add much to the attractiveness of any face. In these days of advancement in the science of dentistry it is possible for everyone to have them. But unless one wishes these nice even teeth to be partly, if not wholly artificial, one must commence to care for the teeth even before they make their appearance, and almost anyone can have

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nice teeth if proper care is given from earliest childhood.

Notwithstanding this, the majority of children in an average schoolroom have defective teeth. In fact, we have examined room after room of children and failed to find one child in a room with teeth in a perfect condition. In many families, no attention is paid to a child's teeth unless he complains of a toothache, and then the tooth is treated with oil of cloves and kindred remedies until the patience of the family is exhausted and the child is taken to a dentist and the tooth extracted. But the teeth that are badly decayed and do not ache are regarded as of little consequence. Especially is this true of the first or baby teeth. These will come out soon anyway, so why give them any especial care or go to the expense of having them filled?

Every decayed tooth has its effect upon the health of the child, so much so, that many children who are sickly and ailing have been found to recover in a surprisingly short space of time when their teeth have been given the proper attention. Growing pains of children usually are rheumatic pains due to decayed teeth.

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In many instances, the first, or baby teeth, are not considered of enough importance to receive any care. If they ache, they are extracted by means of a cord tied to the door knob, by mother's fingers, or in extreme cases, by the dentist forceps. As they have small roots and will be replaced, their removal is not considered a great loss. In the child's mind the chief question is as to the nature of the coming tooth. What child has not faithfully tried to keep his tongue out of the cavity left by the extracted tooth in the firm belief that if he only can accomplish this feat a golden tooth will be his reward! That no one ever was able to obtain a gold tooth except by the aid of the dentist's art does not deter him from biting his tongue nearly in two to keep that wayward member from wandering where its owner did not desire it to go.

The care of the teeth in childhood is a matter of great importance if one would have perfect teeth in later life. If the first teeth begin to decay long before the second ones are liable to make their appearance, they should be filled so as to be preserved until no longer needed. To some, the filling of the first teeth seems to be a needless expense, but

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if one considers that upon the retaining of the first teeth depends the character of the second to a great extent, it is not difficult to understand that the expense is necessary.

If the first teeth are extracted too early, the sockets, which are very frail, are liable to become distorted so that when the second teeth make their appearance they are out of place and misshapen. However, the first teeth must not be allowed to remain after the second ones are ready to make their appearance. A child's mouth should be watched carefully, for it sometimes is necessary to extract a perfectly sound tooth in order to make room for its successor.

The cleansing of the teeth is as important in infancy as it is in later years. The baby's mouth should be cleansed after each feeding if one would preserve the teeth, for the milk accumulates and ferments, thus causing the decay of the teeth.

As soon as a child is old enough, he should be taught the care of the teeth and should be trained to cleanse them several times a day. To care for the teeth properly, one must cleanse them after every meal, as well as morning and night, but so seldom



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can this idea be carried out that it generally is considered that a child who cleanses his teeth thoroughly night and morning is doing his full duty.

The cleansing at night probably is the most important, for then we know the child will go for at least one-half of the twenty-four hours with clean teeth. Of course, after the teeth have been cleansed at night the child should not be allowed to eat anything. The habit some have formed of eating a piece of candy after going to bed is extremely harmful to the teeth. The child should be taught a system of cleansing the teeth by which all surfaces are cleansed. The tooth brush should be selected carefully, a small one with bristles rather far apart. The following little poem, written by a dentist, often is helpful in impressing upon the child's memory that all portions of the teeth should be cleansed:—

Before I lay me down to sleep,  
Each night I'll brush my teeth,  
I'll brush the front, I'll brush the back,  
I'll brush on top and underneath.

Each morning when I awake,  
Again my little brush I'll take

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A thorough brushing to repeat,  
To keep my mouth clean and sweet.

At least twice in each year,  
Before my dentist I'll appear,  
Resolved to follow his advice,  
And keep my teeth polished nice.

Sometimes it is hard for children and their parents to understand why the teeth should be cleansed or polished by a dentist when they have been cleansed with the tooth brush daily. The simple explanation that I have given to children many times is that the teeth really are little knives that cut the food at every meal. Even though the table knives are washed thoroughly after every meal, they have to be polished once a week as they become tarnished. The same is true of the teeth, although they may be cleansed every day, yet there gradually accumulates a coating or tarnish that will not come off with the ordinary cleansing but must be polished off by the dentist.

A green stain frequently is found around the necks of the teeth. This is especially noticed in the mouths of children who have not given daily care to their teeth from babyhood, and requires profes-

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sional skill to remove. Once the stain has been carefully removed and the teeth kept well polished it is possible to keep the stains from reappearing. It is purely a vegetable growth and harmless unless allowed to remain too long, in which case the enamel will be found to be softened or "decalcified" beneath it, causing the tooth to decay more easily.

Tartar deposits usually are shown first by a slight roughness on the inside of the lower front teeth. This is caused by deposits from the saliva of a hard chalky substance and may later appear on other portions of the teeth. The unclean condition of the mouth resulting from tartar deposits is a common cause of "bad breath." The best plan is to go to a dentist and have the teeth cleaned or polished, thoroughly removing all stain and tartar.

An accumulation of tartar where the teeth join the gums is found frequently with children's teeth. This is a contributing cause of pyorrhea, that disease which dissolves the soft bone surrounding the teeth causing them to become loosened and eventually lost. There is no other dental disease in which it is so important for the dentist to have the full cooperation of the patient. The prevention is so much

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more simple than the cure that it seems criminal to allow the teeth of children to be so universally neglected.

At least every six months, every child and every adult should go to a dentist and have the teeth cleansed or polished and examined thoroughly for little cavities. If a cavity is filled when it is small it may save the expense of a large filling later. This bi-yearly polishing will prevent pyorrhea, as well as keep the teeth in good condition and prevent decay.

Decayed teeth (even baby teeth) should not be allowed in the mouth, for they affect the health in many ways. Every little cavity is a receptacle to catch and hold decaying matter and disease germs. These may be germs of one of several diseases which multiply and pass on to the other parts of the body. They may be the germs of tuberculosis and pass on to the glands of the neck or to the lungs or other parts of the body.

Especial attention should be given to the first permanent molar, which often is called the six year molar. Besides coming at about the age of six it is the sixth tooth from the front. It really is the most

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important tooth in the mouth, for not only is it the largest of all the teeth, but it acts as a guide for the other permanent teeth in forming the arch. Unfortunately it has a tendency to decay on the grinding surface soon after its appearance and if not properly filled may be entirely decayed by the time the child is seven years of age. The loss of this tooth may have serious results, for it means the child will have no adequate chewing surface for several years. As a consequence, the habit of swallowing food not properly masticated will be established; indigestion and other ills of adult life may follow as a result. If it were not possible to give proper attention to all teeth, this one at least should not be neglected. Remember it is the sixth one from the front and comes in when the child is about six years of age. It is permanent and will not be replaced by another later. The loss is permanent.

In an examination of thousands of children of all ages, I am more and more impressed with the necessity of giving proper care to the first or baby teeth. I have almost reached the conclusion that it is far more important to look after these baby teeth than it is to look after the second teeth, for if the

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first teeth are cared for and retained until time for the second ones to erupt, the permanent teeth will have a much better arch and will be much stronger and less liable to decay. The importance of the care of the first teeth has only been realized the last few years. Many of the older dentists have not kept up with this modern thought. As a result, the work with school children is much handicapped. I seldom speak to a group of mothers but someone says, "I took my child to our dentist, but he said these teeth would come out soon and it was a waste of time and money to fill them." After talking with a number of the best dentists in various parts of the country who are making a specialty of children's teeth I have answered these mothers, "If I were you, I would take my child to another dentist who has time to give attention to a child's teeth. I have found many of the older dentists are so busy with adults that they do not like to take time to work with a child. You know a child is a problem in a dentist's chair, and unless the dentist is accustomed to dealing with children and really likes to work with them, both he and the child will have a very unhappy hour. There are some dentists who seem especially adapted

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to work with children, just as there are some physicians who make a specialty of treating children. We need these children's specialists among the dentists as much as we do among the physicians. If I were in your place I would take the child to another dentist for this work. Later, when the child is older and has his permanent teeth, you can go back to your present dentist if you wish."

It is very important to remember that if a child's teeth decay early, this is an indication that the child has not received the proper nourishment. It may indicate rickets when no other symptom is present.

With some children the first teeth begin to decay very early, probably due to defective nutrition as well as lack of care. It is very important that the habit of brushing the teeth morning and night be established as soon as the teeth erupt. The time the first teeth appear is shown as follows:

Two lower front teeth, at five to seven months.

Two upper front teeth, at six to eight months.

Two more lower front teeth, at seven to nine months.

Two more upper front teeth, at eight to ten months.

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Four back (molar) teeth, one on each side of each jaw, at ten to fourteen months.

Four more molar teeth, back of the others, at about two years.

Four cuspids (eye and stomach teeth) at two to two and a half years.

Every tooth, as it comes into place, is a milestone that marks another step in the child's development. It will not be until the cutting of all its first full set of twenty teeth has been completed that the mother may feel at liberty to give the child hard, solid food, but before this time she must begin to give regular daily attention to the little teeth.

It is not uncommon to find decayed teeth in a three year old child's mouth. The mother should start the little one in the habit of going to the dentist frequently for careful examination at this early age. If the teeth are cleaned and watched carefully from the beginning by a dentist who understands children, the little one will have no fear of the dentist's chair and will easily establish habits of caring for the teeth. Every tooth in the little child's mouth should be watched for possible decay. If a tooth shows any sign of decay it should be filled and preserved



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until time for the permanent tooth to take its place. It is very common to see children going for several years without certain teeth because the first teeth were neglected until they were so badly decayed that they had to be extracted long before the second set of teeth were ready to take their places.

It is very important to watch the third, fourth and fifth teeth in little children, as these frequently decay as early as the fifth or sixth year of age and will not be replaced by permanent teeth until the child is about ten years of age. If these teeth decay early and are not filled, they will have to be extracted early and the child will be without teeth in these locations for perhaps five or six years. As the first permanent tooth (the six year molar) comes in behind these teeth, it is inclined to lean forward and partially fill up the vacant space, so that when the fourth and fifth teeth are ready to come, the space is partially filled and they are crowded out of line. Thus it is seen that the arch of the second teeth is dependent, to a great extent, upon the filling of the first or baby teeth.

Since the care of the first set of teeth has such an important bearing on the second or permanent teeth,

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and as these teeth so easily and rapidly decay when neglected, it must be one of the important duties of the mother to train the little one to keep the mouth clean.

The child should be taught to cleanse not only the outside of the teeth but also the inside or tongue side and the grinding surface. Decay of the double teeth is most liable to appear on the grinding surfaces, which often are neglected even though the child scours the front surface of the teeth.

HOW TO BRUSH THE TEETH: Smearing the nails with clay or vaseline and endeavoring to cleanse them with an old toothbrush will enable one to form an opinion as to the most effective method of brushing the teeth. Brushing across the nails will leave material along the sides of each nail; brushing up and down the nail will leave the area about the root of the nail uncleansed; but if the brush be used in a rotary manner, the bristles describing a small circle upon the nail, it will be found that all the material will be removed. This motion is to be recommended in brushing one's teeth upon the surface next to the lips and cheek.

For the inner or tongue side, the brush is used as

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one would use a hoe, the rotary motion being impracticable, but in using this motion the brush should not be pushed back, as this will tend to carry food debris and germs beneath the gum margins, which is the thing most to be avoided. The stroke begins up on the gum and moves in the direction of the main axis of the tooth toward the tip or masticating surface.

For the masticating or grinding surface a pulling and pushing motion backward and forward is recommended. This is very important as the six year molar usually begins to decay on this grinding surface.

If the gums bleed when the teeth are brushed, some abnormal condition exists, and a competent dentist should at once be consulted. A healthy gum is not easily injured.

A thorough rinsing of the mouth should follow to remove such material as has been dislodged by the previous processes.

The use of a tooth pick is generally to be condemned, as in its use many persons injure the delicate gum tissue which extends in a crescent-shaped mass between the teeth. The preservation

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of this tissue is very desirable. Dental floss is very valuable in cleansing the surfaces between the teeth, but care should be taken in its use. It should not be held tight between the fingers and forced through between the teeth. Such method allows the floss to snap through with much force, much like the action of a bowstring when released. Thus used dental floss will cause serious injury to the gums. To use floss with benefit draw it carefully through between the teeth with a pulling motion and when it is freely movable draw it carefully back and forth over all the surfaces between the teeth, but do not force it between the gum margins.

The use of tooth powder, tooth paste, or other dentifrice is desirable, and there is no particular choice in the selection of one except that it should not be gritty. In this case it would be too hard for continuous use: there are very few, if any, which can be said to be harmful. Ordinary lime water is excellent for cleansing the teeth, for it dissolves the mucous film which often covers the teeth.

The teeth should be carefully brushed after each meal. When this is impracticable, the teeth should at least be brushed on arising in the morning and

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before retiring at night, and a thorough rinsing of the mouth and gargling of the throat should be practiced after cleansing the teeth.

SKIN— (a) No eruption.

(b) Scalp clean and free from scales.

(c) Scalp free from pediculosis.

Any eruption or breaking out on the skin should be given attention. It is quite common to find scabies (itch) among school children, passed on from one to another. This usually is shown first on the backs of the hands. If not properly treated, it tends to spread to all parts of the body. One child may pass it on to all children in the room.

Another common eruption is ringworm, which also is contagious. The teacher in passing along the aisles in the schoolroom can readily notice any child with a skin eruption. Every such child should be excluded from school until all the eruption has disappeared or until the child brings a certificate from a physician stating the condition is not contagious, cannot be passed on to the other children.

Pediculi or head lice are not uncommon in the

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schools unless the teacher or nurse is constantly watchful. A child from a good home may contract them from a playmate. The scalp of every school child should be washed weekly and attention given to be sure there are no signs of any trouble. Equal parts of kerosene oil and olive oil make a good remedy for general use when these pests are found. Mix the kerosene and olive oil, and rub the mixture well into the scalp at bedtime. Then cover the hair with a piece of muslin and fasten it above the head. The children should be cautioned not to bring the head near a lighted gas jet or other flame.

In the morning wash the scalp well with soap and hot water, then wet the hair with hot vinegar. After which use a fine toothed comb wet in hot vinegar to remove nits. Dry the hair with a towel before going out. Repeat this two or three nights. Attention also must be given to the hat or cap worn by the child to be certain it is disinfected.

CHEST—(a) No evidence of disease of the lungs.

(b) Chest expansion of at least two inches.

In localities that have not had especial attention given to the health of the school children, it is quite

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common to find an average of one or two children in each room afflicted with tuberculosis in some form. The condition may be mild, but this one child is a menace to the remaining children. No parent can feel certain that her child is not being exposed to tuberculosis daily unless every child in the room has been examined carefully. Besides the children who actually have tuberculosis there always will be found some children who are in what is called the pre-tuberculous stage, that is, their system is so far below par that they easily contract the disease. These children should be removed from the room and placed in an open air room where they have extra rest periods and their school work is regulated to their physical condition.

The insurance companies require a chest expansion of at least two inches. Children, as a rule, must be taught habits of deep breathing. This examination of the chest serves to call attention to the habits of the children and to help them overcome any wrong tendencies.

While the chest is being examined to find the condition of the lungs, the physician should examine the heart, for it is becoming more and more com-

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mon to find children with a tendency to disorder of the heart. If the condition is brought to their attention and to the attention of the parents and teacher, these children usually can live long and useful lives; but if they are not aware of the necessity of moderation in work and play, they may overdo and so increase the trouble.

VACCINATION—(a) Good scar or certificate of recent vaccination for small pox.

Vaccination for smallpox with strict isolation of patients has almost exterminated this disease. Where formerly whole communities were wiped out by this scourge, now we find only occasional cases. The chief reason for the decrease in the disease is the common prevention by vaccination. As the disease has decreased, however, there is a tendency to forget the ravages of the past and to think it unnecessary to vaccinate all children. The question is asked frequently if it is not just as well to wait until there are some cases in the community before vaccinating the children. The an-



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swer is, "How do you know that your child will not be the first one to contract the disease?"

In a midwestern town a group of high school students had the misfortune to have what they considered "grippe" last spring. None of them were seriously ill, so no physician was summoned. One member of the class did not contract the disease, but his father developed the same symptoms which, in his case, became so much more severe that a physician was summoned. After a careful examination, the physician pronounced the case smallpox. Then an investigation was started and it was found that about a dozen students had the disease in a mild form. Tracing back, the authorities learned that one student, at the time of the class play, complained of feeling "grippy," also he was quite concerned over a number of pimples on his face. These he attempted to cover up by means of powder applied with a puff which was left conveniently near a box of powder for the others to use. About a dozen students contracted smallpox from this one mild case. None of these students had been vaccinated. One member of the class who had been vaccinated did not contract the disease but

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he did carry it home to his father, who had not been vaccinated. The father developed a rather severe type of the disease. One woman who had been associated with several of the students in their homes had no fear of the disease and had not been vaccinated as this was contrary to her religious beliefs. Notwithstanding her attitude, she developed the disease and, as a result, her face is hopelessly scarred.

Statistics show that smallpox has increased the last year, probably due to the fact that we have lost our concern as the memory of the terrible epidemic fades into the dim past, and have neglected vaccination. No one can tell where the disease will make its appearance next, how severe the type may be, or who will be the first victim. Considering which, it seems best to protect every child from this disease by vaccination before the child enters school.

NUTRITION—(a) Weight normal or not more than ten per cent over or under.

(b) Negative hook worm report (for southern states).

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### (c) No enlarged spleen (malaria).

As the entire book may be taken as a discussion of nutrition of children, it is not necessary in this chapter to go into a discussion of this subject except to mention the more obscure causes for poor nutrition such as may be found in certain localities or in individuals.

*Obscure Causes for Poor Nutrition.*—In some of our southern localities as high as seventy-five per cent of the children are afflicted with hookworm. It would be useless to try to correct the nutrition by proper diet, regulation of sleep, or play without first removing the cause which in these cases is that endemic disease that is keeping the South backward. In localities where half the population are so afflicted, and, as a result, have little energy or interest in life, it is not surprising that there has been little progress in the last century. I have been in some communities where I could imagine I was living in the age of the original settlers, so crude were the ways of living and so lacking in modern facilities. A health worker who knows the prevalence of hookworm, realizes that this unprogressive condition is not due to

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climate or to lack of native ability, but simply to a lack of sanitation.

In these and other localities, malaria accounts for a great deal of the poor nutrition of the children. Here, again, the problem is one of sanitation.

In all parts of the country the hereditary diseases, such as syphilis, must be taken into consideration, as well as the acquired sex habits. The need for circumcision in either boy or girl may be the most necessary consideration.

*Sex Education.*—The question of sex education is one that troubles the majority of thinking parents. There comes a time in the life of every child when he awakens to a realization that life must have a beginning; he probably runs to his mother with the question, "Mother, where do babies come from?" Fortunate, indeed, is the mother who is prepared to answer this first question and so provide the foundation for confidence between mother and child. If the question is ignored or is answered untruthfully, an irreparable injury has been done to the child.

The wise mothers (and fathers, also, for this is not alone a woman's problem) prepare themselves

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in advance, so they are ready when a question comes, no matter what the age of the child. There is no excuse for ignorance now on the part of the parents as there was twenty years ago, for in the last few years the country has been flooded with literature, which is to be found in the book stores and public libraries, that tells the story of life to children and which may be placed in their hands or retold to them.

The parent who neglects to be ready to answer the questions that are bound to come may rest assured that the child will obtain his information from some other source and entirely wrong ideas may be inculcated or habits established that will influence the entire future of the child.

In his progress through childhood the boy or girl comes in contact with many agencies, such as the schools, churches, press, and other organizations. Through these, he obtains much accurate knowledge bearing upon sex hygiene; but what effect this information has upon him, whether it is wholesome or otherwise, depends upon the early attitude of his parents. If they are ignorant, careless, thoughtless or prudish and cloak the subject with mystery,

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a morbid curiosity probably will be aroused which may lead him to unhealthful practices; but if the subject is handled with frankness and reverence, a very little information at a time serves to satisfy the child and start him on his road to a normal and healthful adolescence.

If during his progress from babyhood to adolescence, the child has formed the habit of confiding in his parents, if these parents have not failed him at the critical moment when he asked the first question regarding sex, adolescence comes as a natural sequence to the other talks between parents and child. However, if the parent has missed this opportunity of companionship with his child he (or she) must see that the child has the necessary instruction when approaching adolescence.

Girls must be prepared so that menstruation does not come as a shock to their sensitive natures and so they do not take any risks of injuring their health. In a simple manner the girl can learn something of the anatomy and physiology of the generative organs so that she will understand that menstruation is a normal process of preparation for

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future motherhood. She will understand that it should be the occasion for no especial concern if she gives her body the care and exercise necessary to keep it in a good condition. She will understand that this portion of her body is sacred and not allow the familiarities that might wreck her future.

The boy should be instructed as to the care of his external organs and the effect of conservation of secretions upon his bodily vigor, so he will not risk the loss of manly vigor by self-abuse. Also he should understand that night emissions are natural and not a cause of worry such as to lead him to quack physicians. Habits of self-abuse often are taught the boy at a very early age by his companions unless he has been fortified by instruction at home that will prepare him to resist the harmful suggestions.

Both the boy and the girl should understand that the new sensations and impulses that come to them at this time are indications that their bodies are being prepared for the duties and responsibilities for future parenthood and that this explains the desires which, if understood, may be controlled by whole-

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some living. "Now is the accepted time" to preserve the confidence of your child. Do not postpone it until it is too late.

*The Endocrines.*—The glands of the body are a determining factor in childhood and must be taken into consideration in any problem of nutrition.

Certain children show a decided lack of glandular secretions, producing symptoms so marked they may be observed by anyone. Others may be suffering from a deficiency which is unrecognized. Only by a close study and analysis of the individual can this be detected. We are only beginning to realize the importance of the internal secretion of the glands and cannot even predict what marvelous changes may be possible in the future by supplying a deficiency in undernourished and backward children. Sufficient has been accomplished, though, to make it desirable to keep this possibility in mind in outlining the future health program for any individual.

Certain localities suffer from a deficiency of iodine in the water supply. As a result we have "goitre districts" in which the majority of the children show a tendency to enlargement of the thyroid.



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Very satisfactory results have been achieved by supplying this need in very small doses to all children in the locality.

*Posture.*—Five per cent of all children have curvature of the spine. Many more have flat feet, others have one hip or one shoulder higher than the other. Any dressmaker or tailor will testify that it is rare to find an adult with hips and shoulders equally proportioned.

The following is quoted from a booklet on the school child's health prepared by the American School Hygiene Association,—

“Probably no more astounding thing was revealed in our army health examinations than the great number of flat feet, weak arches, and crooked spines among our young men. If a similar examination of our young women had been made it is believed that even a greater number of such defects would have been found among them. The examiners tell us that practically all of these could have been prevented if detected early and rightly treated. School health experts state that there are at least two million children so afflicted. We seem to have been anticipating the development of the

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science of flying by getting ready to discontinue the use of our lower limbs. The development of transportation facilities of all kinds, as well as the growth of city life, has no doubt accounted for considerable of this most unfortunate development, or rather failure of development.

"Sensible footwear, more walking, hiking, running, jumping, dancing, and playing are the simplest, easiest, most inexpensive, delightful, and surest preventives and cures that can be imagined for such afflictions. See that your child at home and in school gets full chance to do these things, if you would keep him free from these evils or cure him of them.

"Children's feet grow so fast at times that shoes may need to be discarded before they are worn out. Their shoes, because of this rapid growth, never should be purchased to fit snugly or tight. There should be plenty of room in breadth and length. The heels always should be low and broad, the toes high enough to be roomy, and the inner side of the sole straight instead of tapering or curved.

"Examine your boy when he goes to bed at night

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and see if one shoulder or one hip is higher than the other; if his abdomen protrudes decidedly; if, when standing, he leans backward or forward, or to one side or the other. See if, when in bare feet, rays of light can shine through, or a narrow strip of paper pass through under the center of his foot. If it cannot, he is very apt to be one of the future remedy this condition.

“This is more especially so because the confinement to fight or work, unless you take measures to ment and restraint of school life and most school furniture serve to greatly increase these dangers and to develop such disabilities. Finally, do not overlook the fact that in all such deformities or growth disorders there is apt to be some softness of the bones of the body that you can help to overcome at this period of rapid growth by seeing that your child gets an abundance of the foods containing the elements necessary for bone growth,” such as milk, butter, cheese, vegetables, fruits and cereals.

However, much of the poor posture is not dependent upon food but upon the physical handicaps already mentioned. Poor eyesight may be the primary cause, for if a child sees poorly he is liable to

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stoop over his work and gradually train the spine out of line. Play is the best remedy of all for poor posture, not mechanically carried out gymnastics, but play that the child enjoys and that has been regulated to his individual needs.

## CHAPTER VIII

### ENVIRONMENT

EVEN under the most hygienic of living conditions certain children continue to be nervous and poorly nourished and it seems as though only a complete change in environment would bring any benefit.

Behavior clinics are one of the latest innovations in the effort to solve the problem of the nervous and underweight child. The physician in charge of one is quoted as saying: "There is too much mother in the modern family. That is the reason unruly children in American homes are more numerous than ever before. In former days families were large. Nowadays when we have one or two children in a family, the youngsters get too much attention. They become self centered and consequently unruly. Pity the old child! He is the product of modern civilization, and he is a social and medical problem."

By changing the child's environment for a time,

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his whole life may be changed; for he obtains a different outlook on life. This is especially true of the child from a small family. Small families are bad for the children. If these children spend a short time in the company of other children, they get their minds off themselves.

In many cases undernourishment is due to an exaggerated ego. When a child stops eating or eats sparingly, he soon learns the whole family is upset. He enjoys being the center of interest.

Too much attention is bad for any child. One boy who had become a real problem to his mother became a different child after a few weeks' association with other children under wise guidance. This boy had been waited upon from infancy until he had lost all self-confidence. He had been kept so closely at home that he never had had an opportunity of learning the games played by other children. On the rare occasions that he played with others he had too much pride to admit he could not do the things the other children did readily and therefore had assumed a surly, disinterested manner and insisted he did not want to play. In an effort to overcome this handicap, he was encouraged to do many simple things and

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praised whenever he did them well, and taught privately the games played by the others until he had regained his self-confidence. It was surprising to note the changed expression to his face, which soon had a frown replaced by a smile.

Any lack of harmony in the home is reflected in the children. Children are extremely sensitive to quarreling and scolding. The effect of a discordant home life may be great enough to overcome all the good measures instituted for the welfare of the child.

In trying to overcome malnutrition among school children it has been found necessary to know the home conditions. Through the mother-child conferences instituted by some health workers much success has been accomplished because each child is treated as an individual, and in the conference with the mother and child both present volunteer information regarding home conditions and family life is given, which gives the health worker an insight into home conditions that never could be obtained by talking with a group.

By careful questioning of the individual many little things are revealed that in themselves seem to

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be of minor importance, but which may be the deciding factor between good nutrition and malnutrition. Sleep disturbed by street noises may be an important factor, while the disturbance of sleep by mosquitoes and flies always must be taken into consideration. Indeed, there is nothing in a child's day or life that is too small to be taken into account in considering measures to overcome poor nutrition.

An investigation of the living habits of the average nervous child will reveal that this child has not been given the proper home control from babyhood. One such child of six years was found to be eating whatever her fancy craved. At seven months she had shown a preference for potatoes, jelly and gravy, so these had been her chief articles of diet with very little milk. Indeed, I never have found a nervous, underweight child who had a diet suitable for its age.

The wrong habits of eating formed by nervous children in time operate to bring about intestinal disturbances which tend to increase nervousness. Capricious appetite and general finickiness about eating



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is one of the first as well as one of the most important signs of nervous instability. Instead of being encouraged, as is usually the case, these tendencies should be taken as an indication of a more deep seated trouble which should be regulated at once. If the mother, as often is the case, knows that the child is forming wrong habits of living, of diet, but is unable to correct them, she should place the child for a time under the guidance of one who has made this subject a special study.

It is absolutely essential that nervous children be taught regular and healthy food and sleep habits. The very fact that they are finicky about their eating and are restless sleepers makes it more necessary that they should be well trained, since it indicates that they are headed for the class of nervous, malnourished children.

Unfortunately nervous children, in most cases, have nervous parents of a type poorly calculated to train a nervous child. A young child always is intensely self-centered. He likes the position of family czar. The education and training of a child is a socializing process, one in which, if the training

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be carried out properly, the child gradually and contentedly surrenders the center of the stage. This can best be done by association with other children under careful guidance.

## CHAPTER IX

### THE SUMMER CAMP FOR BOYS AND GIRLS

"The organized summer camp is the most important step in education that America has given the world."

—EX-PRESIDENT ELIOT OF HARVARD.

THOUGHTFUL parents and others interested in the welfare of children realize that in the highly organized and specialized manner of living of the present day, there is little opportunity for the child to develop some of the elements that are most essential to the growth of character. The wholesome, out-of-door, simple life of our ancestors with the necessity for creative expression is too rare in the lives of the children of today. The average child is so well provided with mechanical toys and other play equipment that there is little incentive to creative play. There is no opportunity to develop the imagination

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which is so essential to the vision of original work. Everything is done for the child, so that there is no necessity for him to attempt to devise or originate his play equipment.

To meet this real need a summer camp for boys was organized about forty years ago by a man with a real vision of child life. Twenty years later the first camp for girls was started. Since then every year has seen new ones added to the list until recent reports show some twelve hundred camps in the country with an enrollment of over one hundred thousand boys and girls.

These camps vary greatly in their ideas, their objects, their class of patronage and their management and desirability. Some are purely recreational, depending on the out-of-door life for improvement, others have as their main object tutoring, while others might be termed purely commercial. They range from good to bad and some can be found suitable for a child of any age or of either sex and in nearly any location desired.

*Types of Camps.*—Each camp does or should have its especial appeal or object for existence. Certain camps are planned for the needs of boys

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from twelve to eighteen and the main object is the development of a well conditioned physical body. Other camps are planned for boys of the same age but carry out the military training exclusively, others have as their main object tutoring, so the boy who is behind in his classes may overcome this handicap and at the same time be building up his physical body by the out-of-door life.

Girls' camps also vary in their ideals, some of these are tutoring camps while others specialize in one form of recreation, as dancing or horse-back riding.

Then there is the newer camp planned for the younger children exclusively. A few years ago practically every camp limited the age to those over twelve. But the younger brothers and sisters wanted to go to camp and the parents realizing the benefits derived by the older boys and girls felt the younger children also needed this out-of-door supervised life. The Junior department accordingly has been added to many camps. The advisability of this step is questionable in many cases. Unless the Junior Camp is separated entirely from the Senior Camp and managed on special lines, it may be pro-

## WHAT DOES YOUR CHILD WEIGH

ductive of harm rather than good, for the less mature children may overdo and strain their hearts in an effort to compete with their elders in games and races.

The smaller children are of an age where health habits are being formed that will affect their entire future. They need far closer supervision of the little details than do the older boys and girls. A long hike that might be beneficial to a well developed girl of fourteen might do infinite harm to the little sister of eight. Medical examinations of school children have revealed that a number of children are undernourished due to having overtaxed their hearts and general system by trying to enter games and tasks unsuited to their age. Ambitious boys and girls of eight to ten are inclined to try to compete with those several years older if thrown with them in the intimate life of camp. For this reason a children's camp has a distinct place and should be entirely separate from the camp for their older brothers and sisters, where they may enjoy their more simple games and develop naturally without overdoing in competition with the older boys and girls.

## THE SUMMER CAMP

With the younger children individual supervision of the diet is necessary and long hours of sleep are as essential as the out-of-door sports. Nutrition classes in the schools have proven that long hours of sleep are essential in the growth of children. The younger the child the more sleep is needed. The little ones need to go to bed before the daylight has entirely gone, but if a bonfire after dark is being planned for the camp, there is an inclination for the little ones to break their routine habits. This is only one of the details that shows why the little children should be entirely separated from the older boys and girls if they are to obtain the greatest benefit from their summer outing.

*Requirements of a Good Camp.*—At a meeting of the New England Branch of the National Association of Directors of Girls' Camps a Statement of the Basic Standards for the Organized Summer Camps was adopted. From this statement the following is quoted:

“Article I. We believe that the value of any camp depends, first of all, upon its *director*. The individual camp is thus the outgrowth of the personality, vision and ability of its directors,

## WHAT DOES YOUR CHILD WEIGH

transmitted directly and indirectly through their helpers to every camper.

“Article 2. The physical fundamentals of a good camp are: Strict attention to sanitation, pure and sufficient water supply, clean, balanced and appetizing food, strict attention to safety in all activities, beauty of location and such thoughtful selection of equipment as shall secure for each camp whatever its director considers useful in carrying out his work for his campers.

“Article 3. Turning now to the higher purposes which the good camp fulfills, we believe that the good camp should apply to its work, as well as to its corps of helpers, three measuring rods: Health, Character, Joy.

“(a) We believe that the good camp measures its location, sanitation, food, equipment, personal relationships and program in terms of health. It makes the inculcation of health habits an integral part of the camp program, and strives to achieve for its campers good health as a durable and joyful possession, worthy of daily effort and attention.

“(b) We believe that the good camp measures its location, its equipment, personal relationships and



## THE SUMMER CAMP

program in terms of character. It consciously and unconsciously develops in its campers the great fundamental virtues, such as obedience to law for the good of the whole, resourcefulness, loyalty, tolerance, generosity, a desire to serve, leadership; in short, just the qualities most needed for good citizenship.

“(c) We believe that the good camp measures its location, its equipment, personal relationships and program in terms of joy. It secures happiness for the camp season. More than this, one of its chief effects is to enable our youth to revalue for themselves the various ways men employ to secure it. Thus it educates for leisure and for the lifelong enjoyment of the durable satisfactions of life.”

*What Children Should Go to Camp.*—It is considered by those who have made a study of child life that every child (as well as every adult) would be benefited by a season in a well regulated camp. The child that is hard to manage, the nervous child, the underweight child, as well as the normal child, will be benefited by the regular hours, proper food, long hours of sleep and directed play. Not only this, but the summer at camp gives the mother an

## WHAT DOES YOUR CHILD WEIGH

opportunity for the rest she needs from the constant strain of supervision of children. No child is too young or too delicate to go to camp if placed in the right camp. Eight weeks out-of-door living carefully supervised may be counted upon to build a foundation of good health that carries the child well through the following school year with its demands upon the physical and mental powers of the child. The camp is especially valuable to the "only child" who has been given too much attention all during life. The normal association with other children under careful supervision does much to correct habits and tendencies that would handicap such a child in later years. The only child too often is self-centered and inclined to self-analysis. He is "finicky" and habits creep upon him which cannot be corrected at home easily, but which are forgotten in his association with other children.

*Choosing a Camp.*—In choosing a camp for the child the parent should consider :

*The Type* suited to the individual needs and age of the child.

*The Location* whether in the eastern, middle or western states, whether remote or near at home.

## THE SUMMER CAMP

With the younger children the latter is an important consideration, as many parents do not wish to send the younger children too far from home. It is natural for the mother to want to assure herself by personal visits several times during the eight weeks that the little ones are safe and happy. It is hard for a mother to realize that her little ones can be as well cared for and as happy away from her as they are at home even though she needs the rest their absence provides. An occasional few minutes' visit relieves her mind of a great worry.

*Camp Expense* must be considered by the average parent. This varies from the scout camps with volunteer officers and free camp grounds whose only expense is the actual food consumed to the more highly specialized camps with greater expense. Thus the cost may range from five dollars a week to five hundred dollars for the season of eight weeks, but the average well managed private camp has a fixed fee of about three hundred dollars a season. To this in some camps must be added the extras which in certain camps are as great as the original fee.

*The Individual Analysis.*—After the list of

## WHAT DOES YOUR CHILD WEIGH

camps has been sifted down to those in the right location, the desired type and the fee that can be afforded, there should be an individual analysis of the camps that seem suitable. This analysis should include a careful inquiry as to the director and staff; the sanitation, whether the sleeping quarters are located on well drained ground, and whether there is a pure water supply and sanitary disposal of sewage; the dietary and regularity of habits. Too much cannot be given to this investigation by the parent, accompanied, if practical, by a visit to the camp grounds and personal interview with the director. Investigate well, then decide.

## CHAPTER X

### SUMMARY

AFTER everything has been considered we find ourselves back to our original statement that poor nutrition is an individual problem and cannot be treated by forced feeding or any other measure until the cause has been located for each individual child. The most important step, then, for the undernourished child is to have an individual analysis to determine what is the cause of the malnutrition in his especial case. Then, and only then, can results be obtained by proper treatment.

The following suggestions, however, may be safely followed by every undernourished child:

Sleep at least ten hours at night.

Sleep on a screened porch or with windows open  
all the year.

Have a regular bedtime hour.

## WHAT DOES YOUR CHILD WEIGH

Rest half an hour after school.

Play in the open air, not in a close room.

Meals at regular hours.

Nourishing food, especially do not go without breakfast.

Eat slowly and chew the food carefully.

Drink at least six glasses of water every day.

Eat the following every day:—

Fruit, fresh or dried or canned.

Milk—Four glasses if possible. Not less than two.

Well cooked cereal.

Some vegetable other than potatoes.

(Learn to like green vegetables.)

Bread and butter every meal, especially graham and whole wheat.

One egg or small serving of meat (no fried food).

Do not eat pancakes, or drink tea or coffee. Do not eat candy, cake, cookies, pie between meals. Do not eat highly seasoned food, pork or sausage.

## SUMMARY

Have a daily bath.

Have a regular bowel movement every day, go to the toilet at a regular hour.

Have all physical defects, such as decayed teeth, adenoids, diseased tonsils, poor vision corrected.

Play awhile every day and be happy in your work and your play, at home and at school.

Change the environment of the child for a time, so that he learns to play and live with others and not to depend on mother for the things he should do himself. Develop self-reliance but under careful guidance.

## ORCHARD HILL CAMP FOR CHILDREN

*Type:*—Orchard Hill Camp is planned for the health and happiness of the younger children exclusively, girls three to twelve and boys three to ten. It is not an ordinary recreation camp, but might be called a health school in which the camp idea is carried out.

*Location:*—On the beautiful Fox River in northern Illinois, forty miles west of Chicago, near St. Charles.

*The Director:*—Dr. Edith B. Lowry assisted by a staff and group of counselors especially trained in the care of the younger children.

*Sanitation:*—The sleeping cottages or cabins have wide screened porches and are raised above the ground on cement foundations, keeping all dry in rainy weather. As the cottages are situated on the hillside the drainage is entirely away from the buildings. A private sewer system with septic



## ORCHARD HILL CAMP

tank constructed according to specifications of the United States Public Health Service has been installed. All cottages are connected with this sewer system; also each cottage is supplied with running water by a private water system, so that each cottage is equipped with running water and sanitary toilet. Electricity has been installed to avoid the danger of fires from candles and lamps. With small children this is of great importance. The aim of Orchard Hill is to provide outdoor living for the children, yet to eliminate the inconveniences and dangers of the more crude camps.

*The Diets* are under the direction of a dietitian experienced in the needs of children. The dining hall is provided with small tables, each seating three children and a counselor so that individual attention may be given wherever found advisable.

*The Expense:*—The camp fee is three hundred dollars for the season of eight weeks, there are no extras.

Address: Orchard Hill Camp for Children, St. Charles, Ill.



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